Chapter 6
Transport and Logistics to Support Increased Trade and Inclusiveness

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6.1. Introduction and Historical Background

Development of the modern transport system started when the Kyrgyz Republic was part of the Soviet Union. The Soviet Union was a self-sustaining closed economy, guided by geopolitical considerations and geographic features\(^1\) that played a crucial role in crafting the transport system of what is now the Kyrgyz Republic. After the Sino–Soviet split in 1960, the border with the People's Republic of China (PRC) was generally closed until 1992, and the mountainous Kirgizia (the Kyrgyz Republic’s name prior to independence) was the end point of the Soviet Union’s main rail lines and major roads. The high Kyrgyz mountain ranges naturally divide the country into the north and south, and open borders between the former Soviet republics made it economically and technically feasible to build a bypass route to connect the north and south. Transport routes were built to support economic clusters of the Soviet Union as a whole.

On gaining independence in December 1991, the Kyrgyz Republic inherited a transport system that provided good long-distance connectivity within the Soviet Union, but local transport was often poor. The northern part of the Kyrgyz Republic was better connected to Almaty and Dzhambul (now Taraz) than to Osh; while Osh was better connected to Uzbekistan than to the northern Kyrgyz Republic. The most convenient route between the two largest cities, Bishkek and Osh, is through its old road system built in the 1960s. Another way is through its railway connection, however this requires crossing Kazakhstan, Uzbekistan, Tajikistan, and then back into Uzbekistan before finally

\(^1\) Among landlocked countries, Tajikistan and the Kyrgyz Republic are at the third and fourth highest average elevations, behind Bhutan and Nepal (Lissovolik et al., 2017).
returning to Kyrgyz territory just before Osh. However, the emergence of the newly independent states and national borders exposed the need for a national road system, especially for upgrading the Bishkek–Osh road. There were virtually no flights to destinations beyond the Commonwealth of Independent States (CIS) in the 1990s, although domestic flights and flights within the CIS continued to operate using inherited Soviet aircraft. In 1993, the Kyrgyz Republic became a member of the International Civil Aviation Organization and the first non-CIS flight (Bishkek–Istanbul) was opened in 1994. During the winter of 2017–2018, international destinations of Kyrgyz air passenger carriers were limited to several cities in the Russian Federation and Turkey, Urumqi (PRC), Delhi (India), Almaty (Kazakhstan), and Dushanbe (Tajikistan). Rail connections from Bishkek to the main Almaty–Tashkent line were maintained, but there was no domestic rail network. Year-round water transport for freight was maintained on Issyk-Kul (which translates as “Warm Lake”), which has 200 kilometers (km) of waterway (IRTU 2013), but had stalled by 2017. Natural gas was delivered by pipeline to several districts of Batken, Chuy, Jalal-Abad, Osh, and Talas Oblast. Transport was overwhelmingly by road (Figure 6.1).

A principal feature of the Kyrgyz economy in the 2000s was the role of the Dordoi and Kara-Suu bazaars as transit, mainly selling PRC and Russian manufactures to customers from across Central Asia. Transport from the PRC

Figure 6.1: Contribution of Transport Modes to Growth in Freight and Passenger Traffic

a. Contribution to Freight Traffic Growth (%)
was by road or rail through Kazakhstan, and customers transported goods by road to other former Soviet republics. A positive externality of these trade linkages was the development of garment and bean exports. From early 2000s and until 2014, with United States military involvement in Afghanistan as a catalyst, Manas International Airport (and Transit Center) became operational.

During the 2010s, Kyrgyz road network was continuously upgraded, however, the network has started to run down after 2014. The government recognized the need to diversify the economy and looked to better external connectivity as a prerequisite for export diversification. The decade also saw steps to upgrade the country’s airports and to create new rail links, as well as new energy trade initiatives—gas imports via pipeline or hydropower export via electricity transmission lines (see Chapter 7).

Despite the fact that in some years the growth rate reached double digits, the role of the transport sector in the economy remained limited, contributing just 0.3 percentage points to the growth of gross domestic product in 2017. By comparison, in 1996 the transport sector’s contribution to the growth of gross domestic product was 0.4 percentage points. Approximately 6%–7% of the workforce is engaged in transport. During the independence period, the sector was mainly driven by urban passenger traffic, while cargo volume only exceeded the 1994 level in some years. This could be partly because in the early years of independence almost all passenger traffic was privatized, while

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3 In the aftermath of the breakup of the Soviet Union, macroeconomic stability was achieved in 1994, which is why it is selected as the base year.
privatization in the cargo sector developed at a slower pace (the share of cargo road transport by individual entrepreneurs grew from 8.8% in 1995 to 61.9% in 2010). By 2015, the transport sector primarily comprised small enterprises or self-employed individuals, more than half of them with secondary school education. Proliferation of personal vehicles, as well as increased in taxi services, resulted in the rapid growth of vehicle registrations, from 285,000 in 2002 to 1,146,780 in 2017. In 2015, 85% of enterprises’ passenger carriers were used for intracity journeys. The predominance of small-scale businesses lacking in skilled labor force and capital investments limits the potential for the cargo sector to develop.

Despite the dominance of road transport, the efficiency of rail for cargo transport and air for passenger journeys is noticeable. In 2017, 29.8 million tons of cargo was transported by road and 1.9 million tons (6.1% of total cargo weight) by rail. In the same year, freight turnover by rail amounted to 973.3 million ton-km (35.5% of total freight turnover), while by road it was 1.5259 billion ton-km. In 2017, 650 million passengers traveled by bus and 1.5 million people by air. Air passenger turnover was 2.626 billion passenger-km (21.4% of total passenger turnover), and passenger turnover by buses was 8.931 billion passenger-km (Figure 6.2). From 2002 to 2016, freight turnover almost doubled, from 1.660 billion ton-km to 2.643 billion ton-km, and passenger turnover increased by 125% from 5.466 billion passenger-km to 12.290 billion passenger-km.4

**Figure 6.2: Freight and Passenger Turnover by Mode of Transport**

<table>
<thead>
<tr>
<th>Year</th>
<th>Air (ton-km)</th>
<th>Water (ton-km)</th>
<th>Pipeline (ton-km)</th>
<th>Rail (ton-km)</th>
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4 Data from the National Statistical Committee.
6.2. Domestic and International Connectivity

This section provides an inventory of current road, rail, and air connections. Almost all domestic passengers and most cargo travel by road. The country’s rail network is split in half, with the northern region connected to the main TurkSib line to Almaty and to the Russian Federation, and some towns in the southern region connected by spurs to Uzbekistan. Rail and air are important for international connections, the former for goods trade and the latter for passenger arrivals and tourism.

**Roads**

The country has about 34,000 km of roads. The Ministry of Transport and Roads is responsible for maintaining 4,163 km of international roads, 5,678 km of national roads, and 8,969 km of provincial roads. Other secondary, rural, and urban roads (15,190 km) are maintained by local governments or by agricultural or industrial enterprises (Government of the Kyrgyz Republic 2015). Of the international and national roads, “33% are in poor condition and need rehabilitation and reconstruction,” including the main Bishkek–Osh road that

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5 The total length of public roads with hard surface is 7,228 km, including 11 km with cement concrete, 4,969 km with asphalt concrete, and 2,248 km with black gravel. The graveled roads cover 9,061 km and dirt roads, 1,621 km. Ministry of Transport and Roads (MTR) of the Kyrgyz Republic. http://mtd.gov.kg/dorogi-2 (accessed 24 February 2018).
requires constant maintenance due to climate-induced impacts (ADB 2013). The National Statistical Committee noted the high incidence of road accidents: 4,248 crashes reported in 2009 and 7,066 in 2015, resulting in 1,060 deaths.\textsuperscript{6}

The 2013 Asian Development Bank (ADB) sector assessment noted that although development partners have invested about $1 billion in the road network since 1994, “its condition has not improved significantly” (ADB 2013). This seems too critical, especially as ADB’s own assessment of the initial Bishkek–Osh road rehabilitation, for which ADB provided $140 million in financing, is that travel time was reduced from 20 hours to 9 hours, and the number of vehicles using the road increased from 800 per day before the rehabilitation to 8,500 per day after it. Since the road upgrade was completed in the early 2000s, however, segments have deteriorated, especially at high altitudes. Traffic along the road is often blocked by avalanches and landslides due to the absence of protection galleries (rigid snow-supporting structures over roads threatened by avalanches and rockfalls).

The government’s medium-term national strategies for 2009–2013 and 2013–2017 explicitly prioritized support for access to regional markets and provision of transit capacity. To achieve this goal, the government identified six key corridors that need rehabilitating and the need for constructing railroad:

1. Osh–Sary–Tash–Irkeshtam, connecting the PRC border crossing with Osh, which is close to the Uzbek crossing border;
2. Suusamyr–Talas–Taraz, linking the northwestern Talas Oblast to the Bishkek–Osh highway and to the main road through southern Kazakhstan;
3. Bishkek–Naryn–Torugart, linking the second PRC border crossing point to the capital;
4. Sary–Tash–Karamyk, a road to Dushanbe;
5. Osh–Batken–Isfana, connecting Batken Oblast and going to Khujand in Tajikistan;
6. Karakol–Tyup–Kegen, a road to Kazakhstan; and
7. railway: PRC–Kyrgyz Republic–Uzbekistan (section 6.4 of this chapter).

The Issyk-Kul ring, which is a circle rather than a corridor but is crucial for attracting visitors to the country’s top tourist attraction, was added after the National Strategy for Sustainable Development of the Kyrgyz Republic for 2013–2017 was adopted. However, financing for road construction must be tied to resources for maintaining the roads and improving their safety.

\textsuperscript{6} Data from the National Statistical Committee.
The road from Torugart on the PRC border through At-Bashi and Naryn to Bishkek is now an improved highway (no. 3 on the list above). The project was funded by ADB, the PRC, the Islamic Development Bank, and the Arab Coordination Group. Construction of the second north–south road from Jalal-Abad to Balykchy began in 2014, long stretches have been built, although tunnels through the most difficult terrain still have to be completed. The general picture is of substantial improvement in the national road network, although some projects remain incomplete. The government appears to be prioritizing the Bishkek–Osh and Bishkek–Torugart roads by running separate road corridor management departments for them and allocating sufficient budget for their maintenance (about $7,000 per km for the former road and $5,000 per km for the latter).

A process of institutional reform has been set in motion, including separation of road maintenance from the Ministry of Transport and Roads. The ministry’s road maintenance units may continue to be state-owned enterprises, but they will compete with other, private or foreign, companies on tenders. Urban, suburban, and rural roads are not addressed here because they come under local government rather than transport ministry jurisdictions, but issues such as traffic congestion and road maintenance in Bishkek and poor conditions of the “last mile” to the farmgate have economic implications.

Another institutional reform envisaged in the 2015 Road Sector Development Strategy up to 2025 is public–private partnership. The first pilot project involves making the Kubaky Pass section of the Bishkek–Naryn–Torugart road a toll road. This section will reduce the length of the route by 41 km. The private partner will establish a measurement station that will calculate the toll depending on the overall weight and dimensions of a vehicle. The toll fees will cover maintenance of the road and the private partner’s investment in the measurement equipment. A feasibility study has been undertaken for the public–private partnership Uzgen bypass, while for the direct Almaty–Issyk-Kul road, conduct of the study has not yet started.

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8 Repair and maintenance of public roads is carried out by 57 road-operating enterprises. There are six regional road-operating enterprises, three departments that manage international roads (Bishkek–Naryn–Torugart, Osh–Sary-tash–Irkeshtam, and Osh–Batken–Isfana), and the State Direction of the Highway Bishkek–Osh. The general management of the nine road departments is carried out by the State Department of Road of the Ministry of Transport and Roads. http://mtd.gov.kg/dorogi-2 (accessed 24 February 2018).
Rail

The Kyrgyz Republic has 424.6 km of railway track, in two unconnected sets of lines (Figure 6.3). The northern line (323.4 km) runs from Kazakhstan to Bishkek and from Bishkek to Balykchy on the shores of Issyk-Kul (literally, “Warm Lake”). The Bishkek–Balykchy line is scenic but slow, taking 4.5 hours and only operates in summer. The much shorter southern lines (101.2 km) connect Osh, Kara-Suu, Jalal-Abad, and Kyzyl-Kiya to the Uzbekistan network for freight only.

The only operator of the railways is the state company Kyrgyz Temir Jolu, which handles passenger and freight traffic. Rail transport plays a small role for the Kyrgyz Republic, with virtually no domestic rail transport other than the Bishkek–Balykchy tourist train. During the years of independence, passenger journeys by rail have decreased 4.6-fold, unable to withstand price competition from road carriers, whereas cargo traffic tripled its share up to 6.1% in 2017 from 1990 (Figure 6.4a). Rail is used mainly for bulk international shipments (Figure 6.4b).

Fragmented and dead-end railways do not support intracountry trade and limit international trade development. Further development of the rail sector is limited by lack of the investment needed to upgrade capital assets and rolling stock, absence of research and development, shortage of skilled labor, and the poor financial position of the Kyrgyz Temir Jolu. The Rail Sector Development Strategy for 2014–2020 is mostly aimed at renovating and modernizing assets inherited from the Soviet Union. The strategy outlines plans for a shift from diesel fuel to electricity, and prioritizes conducting a feasibility study for constructing the north–south railway. Plans to create a new route linking the PRC to Uzbekistan through the southern Kyrgyz Republic are discussed in section 6.4.

Air

After the collapse of the Soviet Union, the national airline Kyrgyz Aba Joldoru was created and was the only company providing the whole range of air services. From 1997 until 2001 it was reorganized into three independent companies. The resulting national airline Kyrgyz Aba Joldoru and Manas International Airport

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10 The line between Jalal-Abad and Osh via Kara-Suu passes through Uzbek territory.
11 On 23 March 2018, the inaugural passenger train Tashkent–Bishkek–Balykchy was launched, and could spur the development of passenger transport by rail.
12 Government of the Kyrgyz Republic (2014).
Open Joint-Stock Company were organized as joint-stock companies, while the air navigation services provider Kyrgyzavianavigatsia is a state enterprise. Manas International Airport Open Joint-Stock Company manages 11 airports (Figure 6.5).

Gradual modernization of air navigation equipment and continuing professional development of Kyrgyzavianavigatsia employees allows it to maintain the necessary level of air navigation services. In 2016, the company serviced more than 40,000 aircraft, including 11,000–12,000 planes requesting transit support. Kyrgyzavianavigatsia serves 15 national air carriers and more than 50 international airlines (Kyrgyzavianavigatsia. http://www.kan.kg accessed 3 March 2018).


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Figure 6.5: Kyrgyz Republic Airports

This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and any other information shown on this map do not imply, on the part of the Asian Development Bank, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries, colors, denominations, or information.
Of the 86 airports, aerodromes, and landing strips ever built in what is now the Kyrgyz Republic, only 29 now have functioning runways. Eleven have had scheduled service on commercial airlines (Table 6.1), although many services were discontinued after the dissolution of the Soviet Union. Even the country’s main international gateway, Manas International Airport, became derelict in the decade after independence, when most international visitors arrived by road from Almaty Airport. Only Manas, Osh, and Issyk-Kul airports have International Air Transport Association (IATA) international codes.

**Manas International Airport**, the country’s main airport, replaced the old Bishkek city airport during the 1970s. The first plane landed at Manas in October 1974 and the first scheduled flight from Moscow–Domodedovo arrived in May 1975. After independence, the airport was neglected until renovations began in 1996–1998, with financial assistance from Japan.

After 11 September 2001, the United States and its coalition partners sought permission from the Kyrgyz government to use the airport as a military base for operations in Afghanistan. The derelict aircraft were rolled into a pasture next to the ramp, and large, semipermanent hangars were constructed to house fighter aircraft. The operational upgrades included a new parking ramp to make room for larger refueling and transport aircraft, a large cargo depot and several aircraft maintenance facilities, and lighting to facilitate night landing. Temporary accommodation across from the passenger terminal housed over 2,000 troops,
and the Kyrgyz government expanded the passenger terminal to include restaurants, gift shops, and barber shops. The airport terminal underwent major renovation and redesign in 2007, funded with external assistance. In 2012, the airport handled 1 million passengers.

The Manas Air Base was renamed the Transit Center at Manas in 2009. It was closed and handed over to the Kyrgyz Republic’s authorities in 2014. At the same time its operational facilities were upgraded with Japanese assistance. A second terminal was built for “very important people.” Manas International Airport is believed to be profitable, but the route network is limited for a capital city airport. There are 24 scheduled international passenger destinations (among them, only 3 world hubs: Dubai, Istanbul, and Moscow); 6 local destinations; and 5 international cargo destinations. In 2017, the number of flights had increased 1.7 fold from 2010. The number of passengers reached 3.5 million in 2017, having increased by 3.2 times from the 2012 level.

Osh International Airport is the other major passenger airport. In 2012, a total of 0.8 million passengers passed through the airport, and in 2016 the number had increased to 1.2 million, although facilities remained basic. In March 2018, the arrival hall was reconstructed. Seven airlines provide domestic services (several flights per day to Bishkek) and flights to Russian cities and to Urumqi. The passengers going to the Russian Federation are primarily migrant workers, including many from northern Tajikistan and the Uzbek portion of the Fergana Valley. In 2017, Osh had 10,269 flights, almost half of which were international.

The other airports began as landing strips built in the 1930s, 1940s, and 1950s to serve local communities, hydroelectricity projects, and mining operations. Runways and terminals were built in the 1970s and a network of domestic air services was created. Many of the services were discontinued in the 1990s. They are regional class 3C airports whose runways have a weight limit of 22 tons, and they have no instrument landing facilities, operating only during daylight hours. In the 2000s, the government began to rehabilitate some of the airports, including granting “international” status and installing immigration and customs services at three airports.

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14 In 2014, the Japanese government provided very high frequency omnidirectional range (VOR) and distance measuring equipment (DME).

15 For each airfield an operator uses, either as a destination or nominated as a suitable alternate, there is a regulatory requirement to carry out a risk assessment. The consequence of this is to categorize the airfield as A, B, or C (highest risk). A Category C airfield is considered to pose certain problems for the approach, landing, and/or take-off.
Tamchy Airport started operations in 1975 as a reserve airport for the nearby Cholpon-Ata Airport. The current runway and terminal were built in 2003, when the airport replaced Cholpon-Ata Airport, which had regular links with Bishkek, Osh, and Jalal-Abad until 2003. In the same year, the Kyrgyz government renamed Tamchy Airport as Issyk-Kul International Airport. In 2015–2016, the first two stages of airport reconstruction were completed. Scheduled flights in summer serve Osh, Almaty (Kazakhstan), Novosibirsk (Russian Federation), and Tashkent (Uzbekistan).

Karakol International Airport started operations in the 1940s and the current runway and terminal were built in 1978. In November 2011, the Kyrgyz government awarded international status to the airport. The first international flight, SCAT Air’s flight from Almaty on 2 December 2011, was also the airport’s first scheduled flight since 1991. There are plans to start flights to Bishkek, Jalal-Abad, and Osh in the Kyrgyz Republic as well as to Omsk and Novosibirsk in the Russian Federation, and to promote the airport as the gateway to the ski region of the Kyrgyz Republic. However, current use is minimal.

Batken International Airport started operations in 1958 as a landing strip. The current runway and terminal were built in 1984. Batken Airport was given international status on 19 April 2014. Customs and border control checks will be installed and the current runway will be extended by 400 meters. Domestic flights operate to Isfana, Jalal-Abad, and Osh.

Isfana, Jalal-Abad, Kazarman, and Kerben airports have local commercial services but no facilities for international flights. The Kyzyl-Kiya, Tamga, and other airports appear to be primarily used as reserve airports (set aside for special use) in their regions.

Regarding airline services, as of March 2018, five passenger carriers and one freight airline held valid air operator certificates from the Civil Agency under the Ministry of Transport and Roads of the Kyrgyz Republic. Most airlines registered in the country since independence have had a short lifespan. Domestic airlines have diversified scheduled flights to Russian cities, primarily serving the migrant labor market. The most popular domestic route is Osh–Bishkek, and service to the other nine airports is poor.

The domestic airline with the longest lifespan, Kyrgyzstan Air Company was founded in September 2001 as Altyn Air and rebranded as Air Kyrgyzstan in July 2006, after taking over the former national carrier Kyrgyzstan Airlines. Air Kyrgyzstan is based in Bishkek and is owned by Al Sayegh Airlines from Sharjah, United Arab Emirates. In the winter of 2017–2018, Air Kyrgyzstan operated
scheduled passenger flights to Osh, and to Belgorod, Chelyabinsk, Moscow, Krasnodar, Krasnoyarsk, and Surgut in the Russian Federation.

Another relatively long-lasting airline, Avia Traffic was founded in 2003 by citizens of the Kyrgyz Republic and started by providing charter and scheduled domestic flights. Since 2008, it has expanded its activity to international flights. In the winter of 2017–2018, Avia Traffic served 4 cities in the Kyrgyz Republic, 11 cities in the Russian Federation, Almaty in Kazakhstan, Dushanbe in Tajikistan, and Istanbul in Turkey.16

Air Manas was created in 2006 as a charter company. In 2012, the Turkish company Pegasus Airline bought a 49% share of Air Manas, brought in new technologies, and ran it as a low-cost airline under Pegasus Asia. Rapid development allowed Air Manas to return to its own brand name in 2015. The company maintains flights to domestic (Bishkek and Osh) and international (Delhi, Moscow, Tashkent, and Urumqi) destinations. On 1 March 2018, Air Manas became the first Kyrgyz airline that received the IATA Operational Safety Audit (IOSA) certificate, confirming Air Manas’ compliance with the strict international safety requirements.17

Tez Jet was founded in 2013 and serves Batken, Bishkek, Isfana, Jalal-Abad, and Osh.18 Some other airlines are small charter companies, and others are hard to track. All Kyrgyz airlines are listed as banned from the European Union for safety reasons.19

International airlines using Manas International Airport provide passenger services to the PRC (China Southern); Kazakhstan (Air Astana); Dubai (Fly-Dubai and Emirates); Russian Federation (Aeroflot, S7, Sibir, and Ural); Tajikistan (Tajik Air); Turkey (Pegasus); Turkey and Mongolia (Turkish); and Uzbekistan (Uzbekistan Airways). Cargo services are provided by MNG Airlines (to Almaty), RUS Aviation (to Sharjah), Silk Way (to Baku and Urumqi), and Uzbekistan Airways (to Navoi). Turkish Airlines Cargo offers services to destinations on its extensive route network, although its operations on nonpassenger flights are often subcontracted.20

19 The first version of the list was published in 2006, on the legal basis of European Commission Regulation No. 474/2006 issued on 22 March of that year. The current version of the list was published on 30 November 2017.
20 A Turkish airfreight company (rebranded MyCargo after selling a 49% share to the PRC’s HNA Group), and the plane was leased from LCI Freighters One Limited (Ireland).
The government has liberalized Kyrgyz airspace by granting “fifth freedom rights,” i.e., the right of an airline to carry passengers on a flight from the airline’s home country as well as from countries at stops en route to the flight’s final destination.

**Hard and soft infrastructure**

The Kyrgyz Republic’s inherited transport infrastructure went through a decade of decline in the 1990s as the impoverished new state faced major problems following the end of central planning, dissolution of the Soviet Union, and hyperinflation. After 2000, the situation gradually improved as roads were built or upgraded and airports were restored to effective use.

A general problem in Central Asia resulted from the once integrated region being divided by national borders and measures that hampered international trade. The problem highlighted the observation that the benefits of improved hard infrastructure (road, rail, airports, etc.) can be limited if not accompanied by improvements in the soft infrastructure. The Kyrgyz Republic’s entrepôt role was helped by its accession to the World Trade Organization and low tariffs, but the costs of doing business and conducting international trade were high throughout Central Asia, including the Kyrgyz Republic.

The main roads used for international freight by domestic carriers are

- Bishkek–Jalal-Abad–Osh;
- Bishkek–Naryn–Torugart–Kashi (PRC);
- Osh–Sary–Tash–Irkeshtam–Kashi (PRC);
- Osh–Kok–Tala–Pulgon (Uzbekistan)–Batken–Isfana;
- Bishkek–Taraz (Kazakhstan)–Shymkent (Kazakhstan)–Tashkent (Uzbekistan);
- Osh–Jalal-Abad–Andijan (Uzbekistan);
- Bishkek–Almaty (Kazakhstan)–Karaganda (Kazakhstan)–Astana (Kazakhstan)–Petrozavodsk (Russian Federation); and
- Bishkek–Shymkent (Kazakhstan)–Kyzyk-Orda (Kazakhstan)–Aktyubinsk (Kazakhstan)–Russian Federation.

The PRC’s recent ratification of the United Nations Customs Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention) could significantly increase the volume of international trade along the route Tashkent (Uzbekistan)–Andizhan (Uzbekistan)–Osh (Kyrgyz Republic)–Irkeshtam (Kyrgyz Republic)–Kashi (PRC). The UN TIR is already operational in the Kyrgyz Republic and Uzbekistan (IRTU 2017).
The World Bank’s Logistics Performance Index (Figure 6.6b) ranks the Kyrgyz Republic among the countries with underdeveloped logistics. In the 2018 Logistics Performance Index Global Ranking, the country’s overall score was 2.55, and it ranked 108 out of 160 countries. Its lowest-performing areas were international shipments and quality of trade and transport-related infrastructure. Belarus, which ranked 103rd, is also landlocked, shares the Soviet legacy, and is a member of the Eurasian Economic Union (EEU). Moreover, Belarus has lower trade costs on average compared to the Kyrgyz Republic (Figure 6.6a).21

Figure 6.6: Trade Costs and Logistics Performance


PRC = People’s Republic of China.
Note: Uzbekistan is not in the database.

b. Logistics Performance Index, 2018

LPI = logistics performance index.
Note: 1 = low, 5 = high.

21 Belarus is closer to international routes than is the Kyrgyz Republic and outperformed it by custom and infrastructure criteria. This is partly reflected in a notable difference in international trade costs. On average, trading costs with neighboring countries of Belarus were 1.5 times lower than those of the Kyrgyz Republic (UNESCAP–World Bank. Trade Cost Database. http://www.unescap.org/resources/escap-world-bank-trade-cost-database, accessed 10 March 2018).
6.3. Kyrgyz Republic’s Trade Costs vis-à-vis Central Asia

Trade costs are notoriously high in Central Asia, and the Kyrgyz Republic is no exception, as exemplified by the delays at Kyrgyz land borders. Quantifying the costs of doing international trade (trade costs for brevity) is, however, difficult. Formal barriers, including import duties, are often low. Moreover, Kyrgyz trade is mixed, with gold presumably having low ad valorem trade costs due to its high value/weight ratio, while agricultural and manufactured goods often travel in batches, so that their trade costs are hard to compare. Added to the complexity, a significant amount of trade is informal and unrecorded.

The most popular measures of trade costs are those in the World Bank’s Doing Business database. In Doing Business 2015, the Kyrgyz Republic ranked 102 out of 190 countries for overall ease of doing business, and was one of the seven worst places in the world for ease of conducting international trade (Table 6.2). In Doing Business 2019, the Kyrgyz Republic had moved to a substantially higher rank for ease of doing business (from 102nd to 70th place), and for ease of international trade (from 183rd to 70th place).

The pictures offered in 2015 and 2016 are misleading. The situation was not as bad as the 2015 rankings imply. The Doing Business methodology is based on asking informed people in national capitals about the cost of shipping a container in dollars and in time from the country’s commercial center, which may be appropriate for a country such as Singapore but is less appropriate for the Central Asian countries where a small share of trade is by container and where there is a large variation between what an observer in the capital city may hear and what happens on the ground. The huge improvement recorded in costs of international trade between 2015 and 2016 is not credible. Although the relative position of the Central Asian countries in 2015 and in 2016 is plausible

Table 6.2: Ease of Doing Business, 2014–2019

<table>
<thead>
<tr>
<th>Country</th>
<th>Overall Ease of Doing Businessa,b</th>
<th>Ease of International Tradeb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>50</td>
<td>77</td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
<td>68</td>
<td>102</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>143</td>
<td>166</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>146</td>
<td>141</td>
</tr>
</tbody>
</table>

a Overall rank based on the unweighted average of scores in 10 areas.

b 189 countries in 2014 and 2015, and 190 countries in 2016–2019. Turkmenistan is not included in the database.


The pictures offered in 2015 and 2016 are misleading. The situation was not as bad as the 2015 rankings imply. The Doing Business methodology is based on asking informed people in national capitals about the cost of shipping a container in dollars and in time from the country’s commercial center, which may be appropriate for a country such as Singapore but is less appropriate for the Central Asian countries where a small share of trade is by container and where there is a large variation between what an observer in the capital city may hear and what happens on the ground. The huge improvement recorded in costs of international trade between 2015 and 2016 is not credible. Although the relative position of the Central Asian countries in 2015 and in 2016 is plausible
and corresponds to casual observation, the Doing Business numbers tell us little about the magnitudes of costs of international trade in Central Asia.  

The Corridor Performance Measurement and Monitoring (CPMM) program conducted by freight forwarders under the aegis of the Central Asia Regional Economic Cooperation secretariat produces the most reliable measures of trade costs in Central Asia and some neighboring countries. The CPMM program has been operating since 2010, with 2,000–3,000 observations per year, e.g., the 2016 sample consisted of 2,756 trips, 70% by road and 26% by rail. For each trip, a reporter in a truck or on a train traveling along major corridors tracks the cost and time taken. The CPMM indicators of cost and speed provide detailed information about the difficulties of conducting overland trade in the Central Asia region.

The general picture from the CPMM data is of fairly long delays and nontrivial charges at the border, but with large variations. The data in Table 6.3 suggest that border costs have been falling, while Tables 6.4 and 6.5 indicate that the variation is large even when entry points are from the same neighboring country. The large number of observations helps to illustrate the uncertainty and variability of costs and time, and the averages suggest how trade costs can be affected by policy changes such as establishment of the Eurasian Customs Union, later the EEU. However, the large variation reveals that the process of reducing trade costs has been patchy, and that truck drivers approaching a border crossing point (BCP) face substantial uncertainty about how long it will take and how much it will cost to cross the border.

Table 6.3: Average Time at Selected Border Crossing Points, 2011–2015 (hours)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chaldovar</td>
<td>inbound</td>
<td>5.1</td>
<td>4.9</td>
<td>6.6</td>
<td>6.5</td>
<td>6.5</td>
<td>5.2</td>
</tr>
<tr>
<td>Irkeshtam</td>
<td>inbound</td>
<td>12.0</td>
<td>9.9</td>
<td>7.2</td>
<td>6.1</td>
<td>5.2</td>
<td>5.7</td>
</tr>
<tr>
<td>Karamyk</td>
<td>outbound</td>
<td>7.9</td>
<td>3.2</td>
<td>2.2</td>
<td>—</td>
<td>4.8</td>
<td>3.7</td>
</tr>
</tbody>
</table>

— = data not available.

22 The Doing Business indicators have come under increasing scrutiny and the trading across border component has been especially criticized for appearing to give concrete numbers for time and cost. Researchers continue to use Doing Business because the country coverage is wide and the indicators appear to be standardized. However, Doing Business data are often from people in consultancy or law firms who are mostly not traders and who refer to laws and regulations on the books, rather than the implementation on the ground.

23 For a description of the CPMM program, see ADB (2014). In 2016, the Kyrgyz partner, the Association of the International Road Transport Operators of the Kyrgyz Republic (AIRTO), monitored 116 trips, and the number of monitored trips passing through Kyrgyz border crossing points also involved trucks from other countries.
### Table 6.4: Time (hours) and Cost ($) at Selected Border Crossing Points, 2015

<table>
<thead>
<tr>
<th>Crossing Point</th>
<th>Direction</th>
<th>Observations</th>
<th>Time (hours)</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>Chaldovar</td>
<td>inbound</td>
<td>13</td>
<td>6.5</td>
<td>6.4</td>
</tr>
<tr>
<td>Ak-Tilek</td>
<td>inbound</td>
<td>152</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Irkeshtam</td>
<td>inbound</td>
<td>132</td>
<td>5.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Torugart</td>
<td>inbound</td>
<td>61</td>
<td>2.3</td>
<td>2.5</td>
</tr>
<tr>
<td>Karamyk</td>
<td>outbound</td>
<td>6</td>
<td>4.8</td>
<td>4.8</td>
</tr>
<tr>
<td>Torugart</td>
<td>outbound</td>
<td>9</td>
<td>0.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Ak-Tilek</td>
<td>outbound</td>
<td>60</td>
<td>0.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>


### Table 6.5: Time (hours) and Cost ($) at Selected Border Crossing Points, 2016

<table>
<thead>
<tr>
<th>Crossing Point</th>
<th>Direction</th>
<th>Observations</th>
<th>Time (hours)</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>Chaldovar</td>
<td>inbound</td>
<td>10</td>
<td>5.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Ak-Tilek</td>
<td>inbound</td>
<td>.79</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Irkeshtam</td>
<td>inbound</td>
<td>157</td>
<td>5.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Torugart</td>
<td>inbound</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Karamyk</td>
<td>inbound</td>
<td>6</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Karamyk</td>
<td>outbound</td>
<td>62</td>
<td>3.7</td>
<td>4.4</td>
</tr>
<tr>
<td>Torugart</td>
<td>outbound</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Ak-Tilek</td>
<td>outbound</td>
<td>23</td>
<td>0.2</td>
<td>0.3</td>
</tr>
</tbody>
</table>


The Kyrgyz Republic joined the EEU in August 2015, after which customs controls were eliminated on the border with Kazakhstan. At the BCPs, phytosanitary controls were removed in November 2015, leaving only border security and veterinary controls. These changes are reflected in the Chaldovar data in Table 6.3, which show increased delays in 2013 when the Customs Union was implemented by Kazakhstan and the Kyrgyz Republic was not a member, and reversal of the increase after the Kyrgyz Republic’s accession to the EEU. However, Kyrgyz traders still face behind-the-border costs to ensure preclearance at the border and operators report frequent checkpoint stops in Kazakhstan to confirm the transit status of their cargo (CPMM 2018, p. 21).

A surprising feature of the CPMM data on the Kyrgyz–Kazakh BCPs is the big difference between Chaldovar and Ak-Tilek. Ak-Tilek is the main crossing point for Almaty–Bishkek road freight, displacing the Ak-Zhol BCP, which had become too congested and is now reserved for passenger traffic. While in 2015,
Chaldovar was one of the slowest BCPs in Central Asia, and costs were in the middle range, the Ak-Tilek BCP (also inbound from Kazakhstan) was one of the fastest and least expensive (Table 6.4); the large expenses at Chaldovar were customs clearance ($43), border security ($33), phytosanitary fees ($20), and weight inspection ($20), all of which were minor costs at Ak-Tilek. The costs at Chaldovar were lower in 2016 (Table 6.5), but still included an average payment of $44 for customs clearance and $32 for border security.

Similarly, for trucks entering from the PRC, there is a big difference in time and cost between the Irkeshtam and Torugart BCPs. In 2015, the main costs at Irkeshtam were similar to those at Chaldovar, apart from visa fees (customs clearance, $61; border security, $20; weight inspection, $24; and visa/immigration, $22), while at Torugart, average visa fees were $16 and other charges were lower than at Irkeshtam. In 2016, delays at Irkeshtam were slightly longer and financial costs much higher than the previous year: customs clearance, $137; border security, $16; weight inspection, $93; and visa/immigration, $23. At Torugart, average visa fees were still $16 and other charges were trivial.

The difference may reflect that much of the Torugart traffic is going to Kyrgyz destinations, while at Irkeshtam 90% of shipments are in transit abroad. The situation is even worse than Table 6.5 suggests, due to long queues at the PRC border. Furthermore, although customs controls are conducted at Irkeshtam, truckers with payments to make have to stop at the Kara-Suu Customs House where the cargo may be reassessed to ensure that the declared values are acceptable before the duty is paid.

The CPMM 2016 report contains a box on the Irkeshtam BCP based on a visit in April 2016, when the team counted a queue of 50 trucks. The BCP is open from 9 a.m. to 8 p.m. in winter and from 8 a.m. to 6 p.m. in summer; it closes from 12 noon to 2 p.m. for lunch. A Kyrgyz law requires electronic declaration of goods to customs 2 hours before arrival at the BCP, which permits clearance at the BCP within 30 minutes assuming no errors. However, electronic data exchange between customs brokers and PRC counterparts is poor and an estimated 70% of declarations do not meet the 2-hour requirement, which means that data have to be entered manually at the BCP.

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24 There may be a selection bias depending on when the 61 journeys through Torugart took place in 2015. The CPMM report (2016, p. 37) points out that the waiting time at Irkeshtam in the first 7 months of 2015 was 4–8 hours per truck, but in the last 5 months it was 16–22 hours. The Kyrgyz Republic’s accession to the EEU took effect in August 2015. There is also the issue that the sample size at Torugart in 2016 was small.
Unfortunately, the CPMM reports have little information about Kyrgyz–Tajik BCPs and none about Kyrgyz–Uzbek BCPs. Karamyk is on the most direct route from Karshi to Dushanbe, but the Kyrgyz Republic has declared it to be a bilateral BCP for Kyrgyz and Tajik users only, which disrupts transit trade along this route. The Kyrgyz–Uzbek border has been closed frequently and has many informal crossing points.

The overall picture is extremely mixed. On paper, the situation at Kyrgyz borders can be very good, with only short delays and fairly low costs of crossing through important BCPs such as on the Bishkek–Almaty road or the Torugart BCP between Kashi and Naryn and Bishkek. However, there are also major black spots, where delays and charges are high and unpredictable. The situation may be improving with Kazakhstan because of shared EEU membership, with Uzbekistan after the change of president, and with the PRC given the prospect of joint infrastructure projects. However, the main issue appears to be domestic rules and, most importantly, their implementation.

### 6.4. The Eurasian Landbridge through Improved Rail Systems

One of the most exciting transport developments in Central Asia in the 21st century has been the establishment of regular rail freight services between the PRC and Europe. Initial trials consisted of block trains of containers taking components to European carmakers’ assembly operations in the PRC, using the Russian TransSiberian railway in the late 2000s. In 2011, following the implementation of the PRC’s “Go West” policy and opening of large electronic assembly operations in Chongqing by companies such as Foxconn (for Apple products), HP, and Acer, a route via Kazakhstan–Russian Federation–Belarus–Poland to Duisburg in Germany was established. The electronics companies had originally planned to export via the Yangtze River, but with increased river traffic the locks became congested. Rail proved much faster and more reliable than river and sea, offsetting the higher cost per container.

Since 2011, new routes have been tried and the volume of traffic has increased. The PRC news service reported in December 2017 that freight trains had made a total of 6,235 trips on 57 routes since the PRC–Europe services began in 2011, connecting 35 PRC cities with 34 European cities in 12 countries.

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25 Similarly, the Daewoo car factory in Andijan (Uzbekistan, close to the Kyrgyz border) sourced components from the Republic of Korea on ad hoc block trains via Lianyungang and Tashkent. These arrangements have continued since the operation became GM Uzbekistan.
during 2011–2017 (China Daily 2017). In 2017, more than 3,270 journeys were made between cities on the two continents, and the number of such train trips is expected to reach 4,000 in 2018.

The “Landbridge” has been built along preexisting track. It required initial coordination among the national rail companies, led by the Deutsche Bundesbahn and China Railway Corporation, but the win–win outcomes enthused the intervening rail companies. The Kazakh rail company earned over a billion dollars in transit fees in 2015 (CPMM 2016, p. 43). The efficiency of the Landbridge has been enhanced by continued improvement of services offered by freight forwarders and companies such as DHL, FedEx, and UPS, e.g., combining part-container orders, organizing connecting transport, providing refrigerated containers, ensuring problem-free transit for goods under European Union or Russian sanctions, and so on.

The Landbridge concept has been incorporated into the PRC’s One Belt One Road program announced in September 2013, and now known as the Belt and Road Initiative (BRI). The BRI has become a centerpiece of PRC policy, ensuring a high profile (e.g., at the Belt and Road International Forum in Beijing in May 2017) and promising substantial infrastructure funding through the Asian Infrastructure Investment Bank (announced in October 2013 and officially opened in January 2016) and the Silk Road Fund (created in 2014). A significant part of the BRI is the PRC’s commitment to alternative routes beyond the existing land bridges through Kazakhstan and the Russian Federation. PRC maps of the BRI typically show the main rail link passing south, rather than north of the Caspian Sea.

Especially important for the Kyrgyz Republic among the PRC proposals to strengthen and diversify Landbridge rail links is a Kashi–Osh–Andijan rail link, which would provide the missing link in a potentially major PRC–Iran–European Union rail line. The PRC’s 1,446-km South Xinjiang Railway from Turfan to Kashi was completed in December 1999, and in the early 2000s the PRC proposed extending the railway with a Kashi–Andijan line, linking to Uzbekistan’s rail network.26 The PRC–Kyrgyz Republic–Uzbekistan railroad would traverse and tunnel from the PRC’s far western rail terminus at Kashi to the Kyrgyz–Uzbek border town and trade hub at Kara-Suu, 20 km north of Osh, and would then connect with the Fergana Valley’s rail network, which links the region’s major cities and the GM Uzbekistan plant in Andijan. However, the project was dormant between 2005 and 2010.

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26 This was supported by Uzbekistan, for example, at the UNECE–UNESCAP Third Expert Group Meeting on Developing Euro–Asian Transport Linkages held in Istanbul on 27–29 June 2005 (UNECE–UNESCAP. 2005. https://www.unescap.org/fileadmin/DAM/trans/main/eatl/docs/3rd_EGM_Doc3_e.pdf)
In June 2016, the Angren–Pap railway was opened. The 19-km Qamchiq Tunnel eliminates the need for Uzbek trains to transit Tajikistan to reach the Fergana Valley from Tashkent and provides an all-weather alternative to the road over the 2,267 meter Angren Pass. The inaugural train from Angren to Pap passed through the tunnel in 16 minutes.27 By improving the onward connection to Tashkent and the main trunk lines of Central Asia, the Angren–Pap link increases the attractiveness of a railway from Kashi to the Fergana Valley. The PRC–Kyrgyz Republic–Uzbekistan railway network could be integrated into the PRC’s BRI via connections to ports in Pakistan, Iran, and Turkey.28

6.5. Trade Initiatives and Export Potential

How important are better rail, road, and air connectivity for Kyrgyz exports? The answer depends on having the appropriate soft and hard infrastructure and domestic policies (ease of doing business, etc.). The specifics will depend on the nature of the traded goods, but if the country wants to diversify its economy from reliance on gold and remittances, then reduced trade costs will be needed to take advantage of existing and new infrastructure.

Particularly, for the Kyrgyz Republic to expand its fruit and vegetable exports, trade costs in terms of money, time, and uncertainty will have to be reduced. Agreement with neighboring and transit countries is needed to have green channels through which preapproved traders could expect to pass without obstruction or hindrance. More generally, an attitude of risk assessment rather than control at BCPs will be necessary. The new presidency in Uzbekistan and greater collaborations with EEU countries have contributed to opening a window of opportunity for such change. If the Kyrgyz Republic can develop manufacturing capacity by performing tasks in global value chains, the same requirements for reduced costs will apply; having to hold inventories to deal with potential delays is anathema to value chains.

27 The rail line, built by the China Railway Tunnel Group, includes 25 bridges and 6 viaducts.
28 Kashi is the northern terminus for the Karakoram Highway, which the PRC has upgraded to create a viable road route to the ocean port of Gwadar; the PRC has long-term plans for a railway parallel to the highway. A Dakha–Istanbul freight train tested a route through Iran to Turkey and the Bosporus tunnel to Europe in 2017.
6.6. Concluding Remarks and Policy Implications

The literature on the relationship between transport improvements and economic development points to a strong positive effect not only through the direct link between transport costs and the level of trade, but also because widening the market encourages innovation and other productivity improvements. The Kyrgyz Republic faces the dual problem of poor connectivity and market integration both domestically and internationally.

Domestically there have been major improvements in the road network since the turn of the century, although maintenance and road safety remain issues. There has been no change in the domestic rail network, which remains minuscule despite ambitious plans in the 1990s for north–south links.

International road connectivity has improved, illustrated by the emergence of dairy and other agricultural products and clothing exports that mostly travel by road to the Russian Federation, Turkey, Eastern Europe, and the PRC. Rail connectivity inherited from the Soviet era remains poor. However, the expansion of the Eurasian rail network following the success of Landbridge services between the PRC and Europe, and the PRC’s commitment to the BRI, could provide an important window of opportunity for the Kyrgyz Republic.

Improving road, rail, and air connectivity domestically and internationally will require financing, which is obviously an issue for a small poor country with inhospitable terrain. However, even more important than new investment is the need to improve the soft infrastructure associated with transport.
References