A. Sector Road Map

1. Sector Performance, Problems and Opportunities

1. National context. Kazakhstan has a land area equal to that of Western Europe but has one of the lowest population densities globally. Strategically, it is well placed to act as a land bridge between Asia, Europe, and the Middle East, and it links the large and fast-growing markets of the People’s Republic of China (PRC) and South Asia with those of the Russian Federation and Western Europe by road, rail, and a port on the Caspian Sea. Kazakhstan is classified by the World Bank as an upper-middle-income country; its gross domestic product (GDP) per capita in 2018 was $9,036. Despite recent efforts at diversification, it remains heavily dependent on the oil and gas sector, with oil and gas exports accounting for 26.4% of merchandise exports in 2017.1 In addition to its dependence on commodity prices, the Kazakh economy is heavily dependent on economic conditions in the Russian Federation.

2. GDP growth in Kazakhstan averaged just under 5% during 2008–2014, but the fall in oil prices and sanctions on the Russian Federation in 2014 caused growth to drop to just over 1% in both 2015 and 2016. Oil prices showed some recovery in late 2017 and, together with a rise in output, lifted GDP growth to 4.0% in 2017 and 4.1% in 2018 on the back of stronger exports and recovering domestic demand. Because of a slowdown in industry and mining, growth is forecast to decline to 3.5% in 2019 and 3.3% in 2020, reflecting mainly lower oil prices and slower growth in the PRC and the Russian Federation. These forecasts are lower than the 4% potential growth of Kazakhstan suggested by the International Monetary Fund in 2018 and Kazakhstan Strategy 2025 target of 5% GDP growth.2

3. Transport sector overview. The modal split and intensity of Kazakhstan’s transport sector are functions of its dependence on extractive industries (high bulk commodity flows), its status as a transit country, and its low population density. The principal transport modes are road and rail. Measured as tonnage, road transport dominates, with 84% of the total in 2017, but measured as ton-kilometers (km), rail dominates, with 47% of the total. The share of road haulage, again as ton-km, increased steadily from 2008 to 2017, from 17% to 29%, while the share of rail haulage decreased from 58% to 47% over the same period. Road freight grew by an annual average of 5.5% from 2011 to 2017.

4. Kazakhstan is extremely freight intensive, producing around $0.3 of GDP per ton-km (across all modes). This is significantly below the productivity of freight transport in the United States (1 ton-km per $4.4 of GDP) and the European Union (1 ton-km per $4.0 of GDP). Among the likely causes of this are low unit freight values, long haulage distances, and transit traffic.

5. Unimpeded transit traffic has been a goal of the Central Asia Regional Economic Cooperation (CAREC) Program since its founding. Kazakhstan has been a member of CAREC since 1997 and four of the six CAREC corridors pass through its territory. CAREC corridor 1 supports trade flows from the PRC via the Kyrgyz Republic and Kazakhstan to the Russian Federation and Europe, corridor 1c carries agricultural products from the Kyrgyz Republic via Kazakhstan into the Russian Federation, and corridors 3 and 6 carry agricultural products from

---
Uzbekistan to Kazakhstan and transit shipments from Uzbekistan across Kazakhstan into the Russian Federation. Kazakhstan’s transit potential is immense because of its large geographic area and strategic location. The PRC’s Belt and Road Initiative, launched in 2015, is expected to lead to significant increases in transit traffic.

6. **Road network.** Kazakhstan has a total road length of 97,000 km. As of 2017, 24,000 km were classified as republican (national) roads, of which 92% are paved (although this includes a large proportion of “black gravel roads”), with the rest consisting of oblast (provincial) roads and district roads. The road density is very low at only 3.5 km per 100 square km. There are five technical road categories, from I (four or more lanes) to V (a single lane). Category II and category III roads account for 85% of the republican road network.

7. **Road institutions.** The Ministry of Industry and Infrastructure Development (MIID) acts as the republican road asset holder. The Committee of Roads (COR), under the MIID, is responsible for developing policies and the legal framework, and for implementing the government’s road sector strategies. KazAvtoZhol National Joint Stock Company (KazAvtoZhol) (a wholly state-owned entity) is the national roads operator. It has an agency agreement with the COR for management of the republican road network, implementation of investment projects, procurement and supervision of reconstruction and periodic maintenance, and the operation and maintenance of toll roads. KazAvtoZhol has been a borrower and executing agency for several road projects financed by the Export-Import Bank of China and the European Bank for Reconstruction and Development (EBRD).

8. All road rehabilitation works financed from the central government budget are awarded to contractors by KazAvtoZhol following open bidding. The exception to this is routine maintenance (summer and winter), which in the case of toll roads is carried out directly by KazAvtoZhol and for all other roads by Kazakhavtodor LLP, a limited liability partnership that had belonged to the COR before being privatized in mid-2019; Kazakhavtodor LLP mainly carries out routine maintenance works, landscaping, and emergency response. JSC KazDorNII, based in Almaty, is the COR’s design and research institute. It carries out survey, design, and research work; and draws up technical regulations and standards related to roads.

9. **Road conditions.** In 2014, MIID set targets of 38% of republican roads to be in good condition by 2016 and 48% by 2020. However, COR and KazAvtoZhol have not established a quantitative road condition assessment and current assessment is based on quality indices reported annually on the basis of two annual visual surveys undertaken every spring and autumn. There are four such indices: a pavement index, a structures index, a roadbed index (shoulders and drainage), and a roadway index (signals and other safety features). A weighted average of all four is known as the total complex index, that represents the percentage “without defects” and applies to an entire road or oblast.

10. These biannual surveys are supplemented by a further visual assessment undertaken by representatives of the traffic police, KazAvtoZhol, and Kazakhavtodor LLP, during which each km

---

3 Black gravel is a mixture of gravel or crushed stone with bitumen, spread over the road and compacted.
4 Good condition can be equated to an International Roughness Index of less than 4.0 (the threshold depends on traffic).
is marked good, satisfactory, or unsatisfactory. A recent technical assistance report concluded that the ratings were very subjective and subject to error.  

11. **Maintenance budget and allocation.** The budget holder for republican and local roads is the COR. The budget is funded from the state budget, the national welfare fund, and external loans. To date, financing from external loans has only been used for the construction or reconstruction of republican roads. Republican roads expenditure during 2001–2017 is in the table.

<table>
<thead>
<tr>
<th>Table 1: Republican Road Network Expenditure, 2001–2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>2001</td>
</tr>
<tr>
<td>2002</td>
</tr>
<tr>
<td>2003</td>
</tr>
<tr>
<td>2004</td>
</tr>
<tr>
<td>2005</td>
</tr>
<tr>
<td>2006</td>
</tr>
<tr>
<td>2007</td>
</tr>
<tr>
<td>2008</td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>2010</td>
</tr>
<tr>
<td>2011</td>
</tr>
<tr>
<td>2012</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
</tr>
<tr>
<td>2015</td>
</tr>
<tr>
<td>2016</td>
</tr>
<tr>
<td>2017</td>
</tr>
</tbody>
</table>

a Routine maintenance includes winter maintenance, patching, and some crack sealing.  
b Midterm repair includes periodic maintenance such as surface treatment or thin overlay.  
c Capital repair encompasses structural overlay.  
d Computed by taking the sum of routine and periodic maintenance and rehabilitation, converted to United States dollars at ruling exchange rates, and dividing it by the total republican network of 24,000 kilometers.  

12. Using the data from the table, salient averages per km of the road network per year during 2013–2017 are as follows: (i) routine maintenance: $2,800; (ii) routine maintenance and midterm repair: $5,300; and (iii) routine maintenance, midterm repair, and capital repair: $7,600. Total expenditure for 2013–2017 was 0.8% of gross national income for the same period, which is low compared with other countries with comparable GDPS per capita.

---


6 The national welfare fund is a sovereign wealth fund and is only used in exceptional circumstances for road works.

13. **Road asset management system.** The World Bank has been supporting the development of a road asset management system (RAMS) in Kazakhstan and awarded a consultancy contract in 2015. The consultant completed the draft final report in November 2016, procured data collection equipment, collected relevant network inventory and condition data, and prepared a 3-year pilot program. The finalization of the RAMS is still ongoing.

14. **Road safety.** All the CAREC countries have seen rapid growth in their passenger vehicle fleets, with Kazakhstan’s private passenger fleet growing by 5% per year, between 2008 and 2018. With about 204 vehicles per 1,000 people, Kazakhstan is second to Georgia among the CAREC countries. Despite a rapidly growing fleet, the number of reported fatalities fell from a peak of 4,365 in 2007 to 2,086 in 2017. Over the same period, however, the number of injuries increased by 17% and the number of crashes increased by 7%. The national cost of road crashes was estimated at just under 4% of GDP in 2013.\(^8\)

15. The COR is accountable for road safety on national roads. However, road traffic accidents—given the diversity of their causes and impacts—go beyond the COR’s responsibilities and usually become a concern of the health, police, education, and information authorities. The government, supported by the World Bank, has compiled systematic accident data through road accident audits. The government is committed to improving road safety and endorsed the CAREC regional road safety strategy for 2017–2030 at the 15th CAREC ministerial conference in Islamabad in October 2016.\(^9\)

2. **Government’s Sector Strategy**

16. There are six strategic plans that influence the road sub-sector. At the operational level the most relevant and recent strategy is KazAvtoZhol’s 2013–2022 strategy, most recently updated in February 2018. Its targets during the strategy period are as follows: (i) implement the construction or reconstruction of 5,100 km of republican roads; (ii) undertake routine maintenance, midterm repair, and capital repair on 10,100 km republican roads; (iii) ensure 88% of the republican road network is in good or fair condition; (iv) toll 72% (15,917 km) of republican road network; and (v) build 260 roadside facilities.

17. The ambitious tolling target is linked to a proposal for KazAvtoZhol to greatly increase its self-financing in an internal report by McKinsey for the EBRD; the report’s recommendations have not yet become official policy. KazAvtoZhol has significant potential to expand the toll system to compensate for operating and maintenance costs. Based on planned volume of budget financing, the support of the industry from traditional sources of financing will be reduced gradually starting from 2020.

18. The Government of Kazakhstan has introduced strong policy reforms since 2005. Along with the proposed project and previous projects, ADB has supported wide-ranging sector policy and institutional reforms to bring about sustainable improvement in the performance of the road transport sector. The reform progress achieved to date has been based on capacity building and other technical assistance from ADB and the World Bank, but attributable mainly to intense policy dialogue between the government and development partners such as ADB on the reform framework and specific reform measures. The policy framework relates to the sustainability of transport assets, cost recovery, sector planning, road traffic safety, and trade facilitation.

---


B. Major Development Partners: Strategic Foci and Key Activities

19. ADB is the lead agency in the transport, customs cooperation, and trade facilitation activities in Kazakhstan. Other development partners involved in roads in Kazakhstan are mainly the EBRD, the Islamic Development Bank (IDB), the Japan International Cooperation Agency (JICA), and the World Bank, and some other bilateral partners, such as the Export-Import Bank of China. The supports are largely focused on helping Kazakhstan upgrade its transport network along CAREC transport corridors and on strengthening its regional trade and transport links.

Table 2: Major Development Partners and their Representative Projects

<table>
<thead>
<tr>
<th>Development Partner</th>
<th>Project Name</th>
<th>Duration</th>
<th>Amount ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Islamic Development Bank</td>
<td>CAREC Transport Corridor I (Zhambyl Oblast Section) [Western Europe–Western People’s Republic of China International Transit Corridor] Investment Program, Project 2</td>
<td>2009–2014</td>
<td>170.0</td>
</tr>
<tr>
<td>JICA (JBIC)</td>
<td>CAREC Transport Corridor I (Zhambyl Oblast Section) [Western Europe–Western People’s Republic of China International Transit Corridor] Investment Program, Project 3</td>
<td>2010–2013</td>
<td>74.4</td>
</tr>
<tr>
<td>World Bank</td>
<td>CAREC Transport Corridor I (Zhambyl Oblast Section) [Western Europe–Western People’s Republic of China International Transit Corridor] Investment Program</td>
<td>2008–2013</td>
<td>2,125.0</td>
</tr>
<tr>
<td>EBRD</td>
<td>CAREC Transport Corridor I (Zhambyl Oblast Section) [Western Europe–Western People’s Republic of China International Transit Corridor] Investment Program</td>
<td>2008–2013</td>
<td>180.0</td>
</tr>
<tr>
<td></td>
<td>Atyrau Astrakhan Rehabilitation Project</td>
<td>2019–2025</td>
<td>301.0</td>
</tr>
<tr>
<td></td>
<td>Kurty–Burybaital Road Project Extension II</td>
<td></td>
<td>106.0</td>
</tr>
</tbody>
</table>

CAREC = Central Asia Regional Economic Cooperation, EBRD = European Bank for Reconstruction and Development, JBIC = Japan Bank for International Cooperation, JICA = Japan International Cooperation Agency, Oblast = province or provincial.


C. Institutional Arrangements and Processes for Development Coordination

20. The development mechanism to coordinate international and bilateral financial institutions consists largely of the exchange of information and policy dialogue, along with sector-specific development partner coordination—informal meetings at heads of agencies and technical levels are held irregularly. In May 2014, the Government of Kazakhstan signed partnership framework agreements on strengthening cooperation with ADB, the EBRD, the IDB, and the World Bank to implement key reforms and development programs in prioritized areas. To coordinate cooperation with the IFIs, the government statutorily established the Coordination Council on Investment Attraction chaired by the Prime Minister of the Republic of Kazakhstan and comprising heads of government bodies and above IFIs. The government also established working groups tasked with forming and implementing projects in each of the defined priority areas and are composed of government representatives and the concerned IFIs. The Coordination Council on Investment Attraction and working groups meet regularly and jointly discuss the progress of program or project preparation and implementation. ADB has established good relations with bilateral and international partners in Kazakhstan, with the Kazakhstan Resident Mission playing an important role in this regard.

D. ADB Experience and Assistance Program

21. ADB assistance in the Kazakh transport sector has been largely successful. ADB started its transport operations in Kazakhstan in 2000. It approved the first multitranche financing facility
(MFF) for the CAREC Transport Corridor 1 (Zhambyl Oblast Section) Investment Program in 2008 with an aggregate amount not exceeding $700 million and completed it in 2015 with a rating of successful.\(^\text{10}\) ADB approved a second MFF in 2010 for the CAREC Corridor 2 (Mangystau Oblast Sections) Investment Program with an amount not exceeding $800 million. Tranche 1 with a loan amount of $283.0 million was completed in 2015 and rated successful.\(^\text{11}\) Tranche 2 with a loan amount of $371.3 million was approved in 2012 and is ongoing. ADB also approved project loans of (i) $95.0 million to finance the CAREC Corridor 1 (Taraz Bypass) Project in 2011, completed in 2015 with a successful rating;\(^\text{12}\) and (ii) $240.0 million in 2016 to reconstruct the 299 km Aktobe–Makat road.

22. ADB, in collaboration with other development partners, has jointly supported institutional restructuring and capacity development in the Kazakh transport sector. Support has focused on (i) separating policy making and planning from implementation of road works; (ii) developing a road asset management system; (iii) introducing results-based planning and monitoring, and modern transport information technologies; (iv) institutionalizing road safety audits; (v) enforcing control of traffic overloading; and (vi) expanding toll road operations. These interventions have been largely effective because of close and effective coordination and collaboration among the development partners and good government ownership. Such coordination will remain critical as the government continues its efforts related to road system modernization, efficient use of road assets, and further reduction in transport and logistic costs.

23. ADB’s operational effectiveness in Kazakhstan has been satisfactory, especially its project implementation performance. It is also significant that 100% of ADB financing is aligned with core operational areas and government priorities. Nonetheless, ADB’s operational and organizational effectiveness in Kazakhstan still faces challenges, notably the need to improve coordination between the government and development partners, respond the government’s rapidly to meet the government’s demand, and ensure strictly following ADB’s safeguards polices. ADB must also provide Kazakh implementing agencies with the capacity to attract investments and manage them sustainably, especially after completion of the projects funded by the development partners. In cross-border transport projects, physical infrastructure development must be accompanied by institutional and procedural improvements. Greater efforts are needed to deal with nonphysical barriers to trade.

24. Regional cooperation is important for Kazakhstan and neighboring countries to expand their markets and diversify their economies. Kazakhstan will gain from leveraging its strategic location to facilitate trade and transit between Asia and Europe along CAREC transport corridors passing through its vast area. ADB’s road interventions, along with collaboration with other IFIs, will contribute to the government’s development objective. ADB’s role remains strategic, and ADB has adequate capacity to implement road projects in Kazakhstan. ADB will provide continued support to the modernization of Kazakhstan’s transport and logistics system, and will keep taking the lead in coordinating development partners’ different strategies and interests in Kazakhstan’s transport sector to synergize resources and maximize their impact.

\(^{10}\) ADB. 2017. *Completion Report: CAREC Transport Corridor I (Zhambyl Oblast Section) [Western Europe–Western People’s Republic of China International Transit Corridor] Investment Program in Kazakhstan.* Manila.

\(^{11}\) ADB. 2017. *Completion Report: Central Asia Regional Economic Corridor 2 (Mangystau Oblast Sections) Investment Program, Project 1 in Kazakhstan.* Manila.

\(^{12}\) ADB. *Kazakhstan: CAREC Corridor 1 (Taraz Bypass) Project.*
Problem Tree for Transport Sector

**IMPACT**

- Slowed Economic Growth and Welfare Loss

**CORE PROBLEM**

- Travel on road network connecting the western region of Kazakhstan takes excessive time and is unsafe

**CAUSES**

- Constrained road connectivity and mobility
- Poor road condition and connectivity

- Road asset management system yet to be operational
- Inadequate maintenance and suboptimal fund allocation
- Contracting industry still government dominated
- Staff skills gap and absence of an incentive system
- Inadequate road safety design and poor safety endorsement and awareness
- Deteriorated road condition with obsolete technical standards
- Growing heavy vehicles and overloading
- Limited private sector involvement in road sector
- High susceptibility of transport infrastructure to harsh climate

- Tackled through the proposed project
- Supported by the World Bank
- Supported by the European Bank for Reconstruction and Development