

Reference Document for Session 1

Operationalizing Economic Corridor Development in CAREC: A Case Study of Almaty–Bishkek Corridor

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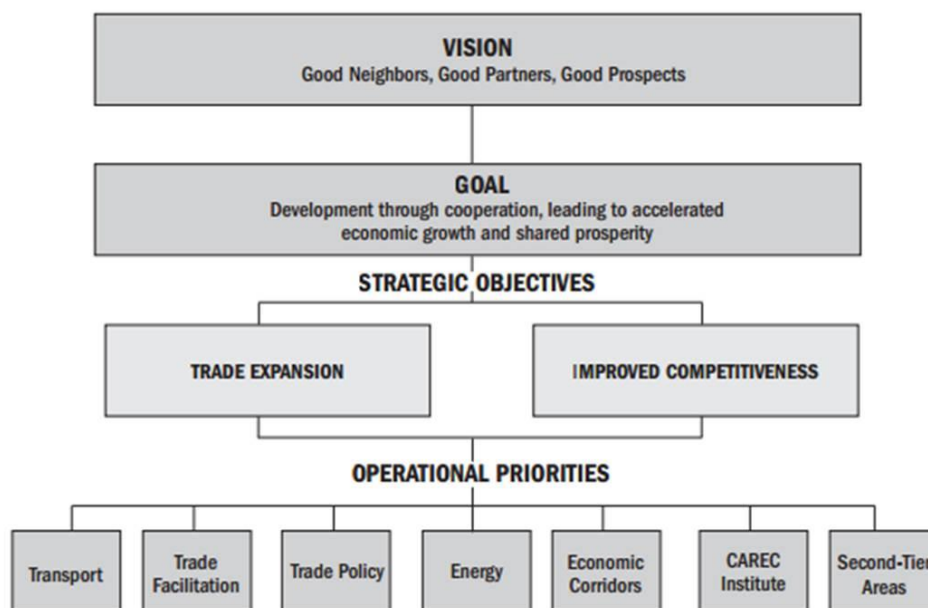
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I. Introduction and Summary

1. At the close of a decade of regional cooperation, member countries of the Central Asia Regional Economic Cooperation (CAREC) Program adopted a new, long-term strategic framework in 2011, the *CAREC 2020*.¹ While outlining the vision and goals of the CAREC Program, CAREC 2020 also underlined the operational priorities over the next decade, with a key innovation being the introduction of Economic Corridors as a core priority for the CAREC Program, in addition to the four priority sectors of CAREC: Transport, Trade Facilitation, Trade Policy, and Energy (Fig 1.1).

Figure 1.1: CAREC Strategic Agenda 2011–20



Source: CAREC 2020

2. As a long-term strategy document, *CAREC 2020* sought to look over the immediate horizon, opening the possibility of second-tier areas and emphasizing too the need for knowledge component of CAREC cooperation through the CAREC Institute (CI). Some progress has been made on the CI since the adoption of *CAREC 2020* with the member countries agreeing at the 12th CAREC Ministerial Conference in Astana in 2013 to its physical establishment in Urumqi, People's Republic of China (PRC). The objective of the present study is to move forward CAREC Program's agenda on operationalizing Economic Corridors Development (ECD).

3. Even in the best of circumstance, ECD is a complex area but with commensurately greater potential payoffs in terms of generating economic value, creating jobs and promoting

¹ ADB. 2012. *CAREC 2020: A Strategic Framework for the Central Asia Regional Economic Cooperation Program 2011–2020*. Manila.

growth. It is in some sense the most complex of operational priorities laid out in *CAREC 2020*. Consider for example the construction of a high-rise building. The concrete and girders provide the essential skeleton for the building, and the wiring and pipes address critical energy and sanitation aspects. However, the returns from the investment will overwhelmingly depend on what economic activities are established within the building and how profitable they are over time. There are virtually no blueprints and engineering solutions available for this, only best practices, experience and learning-by-doing to customize solutions. ECD is ultimately about how physical infrastructure can be used to catalyze and spatially organize economic activities to generate productivity and growth. Each context and application of ECD is *sui generis*.

4. Central Asia region has its own additional challenges when it comes to ECD, which are well known: landlocked economies, vast distances, difficult terrain, sparse and scattered populations, and resource endowments that tend to raise costs of non-tradable goods. Historical absence of market-based economic development is also a challenge. At the same time, the region has certain advantages too, starting with relatively well-educated populations that, in many cases, share language, culture and history; middle-incomes status for many of the members; and experience with complex manufacturing and industries (albeit often inefficient) in the past.

5. As a first step in operationalizing the introduction of ECD into the CAREC program, this study aims to further elaborate the ECD concept, customizing it to the Central Asian region, and to explore potential applications of ECD in the region. Since this is a new concept for CAREC and for some of the countries, and given the unique attributes of the region, it is possible ECD may be deemed ahead of its time in some parts of CAREC. Yet, it is perhaps inevitable ECD would be of relevance over the longer term to most countries seeking to address priority concerns towards economic diversification, job creation, and spatial transformation. Starting the accumulation of relevant experience and sharing lessons can thus be a useful role for the CAREC program. There are 6 CAREC Corridors and it is impractical to start simultaneously with all: the study chose Corridor 1 for analysis, which goes through 3 CAREC countries and is also an important route connecting PRC and Western Europe..

6. In sum, therefore, the objectives of the present study are to (i) elaborate and customize the ECD concept in the context of the CAREC region, and (ii) to identify and assess specific possible areas where application of the ECD concept may be piloted to operationalize corridor development in CAREC.

7. The study is divided into four chapters following this introduction. An elaboration on the concept of corridors and ECD is provided in the next chapter, which distinguishes three tracks for CAREC corridor development: transport corridors, transit corridors and economic corridors. Transport and transit functions of CAREC corridors are covered comprehensively in the recently approved CAREC Transport and Trade Facilitation Strategy (TTFS 2020).² The study thus focuses only on the third track, economic corridors. The chapter also draws upon experience with development of economic corridors in other parts of Asia to highlight important prerequisites for success. Important among these are high level of political commitment, strong role of private sector at both conceptualizing and implementation stages, institutional mechanisms to coordinate diverse stakeholders, detailed and comprehensive macro- and sector-level analyses, and need for a long time horizon and sustained commitment. Underlying all these of course, is the need for economic potential: an economic corridor cannot create activities in a vacuum, it can only channelize and magnify the inherent economic potential. For

² ADB. 2014. CAREC Transport and Trade Facilitation Strategy 2020. Manila.

this reason, the study narrows within CAREC Corridor 1 on a smaller segment, namely the Almaty–Bishkek link and its potential for development as an economic corridor. The analysis presented here highlights this segment—the Almaty–Bishkek Corridor (ABC)—as possibly providing the highest economic potential for a cross-border ECD in the short term.

8. Although the transit function is not the focus here, the unique role of Bishkek in regional distribution, particularly through the Dordoi wholesale market, has been defined by the trade of goods from PRC through Corridor 1. This transit function has been an important determinant of the structure of economic activities in Bishkek, including the recent dynamic growth of its garment exports. In Chapter 3 of the study, an analysis is undertaken of how the transit of goods along Corridor 1 will be affected by the announced intention of the Kyrgyz Republic (KGZ) to accede to the Eurasian Customs Union (CU). Wholesale and retail trade in Dordoi and Bishkek, as well as the garment sector, will clearly be facing a more challenging environment under the new CU regime. A detailed comparative analysis of trade and logistics costs of moving imports from PRC to Almaty and to Bishkek shows Bishkek's cost advantage will be severely diminished, but there are other factors that may mitigate the adverse outcome.

9. A detailed but preliminary exploration of the Almaty–Bishkek Corridor (ABC) and its potential for development as an economic corridor is undertaken in Chapter 4. The socio-economic profile of ABC shows its economic potential is anchored on its endpoints, the cities of Almaty and Bishkek. The extent to which ABC can become an economic corridor is thus dependent upon the links between the two cities and the growth dynamics of each city. Both Almaty and Bishkek are large regional cities in their own right, though Almaty's economy is the largest in the region by a substantial margin. The cities also have strong historical and cultural ties along with trade links that include the so-called 'shuttle traders' at the border. However an analysis of the trading barriers between Almaty and Bishkek, looking at the behavior of prices for same goods in the region, indicates there is considerable room for greater integration of the two cities. The dispersion in prices is compared across four cities in proximity – Almaty, Bishkek, Taraz and Shymkent – and shows border effects and distance effects (through internal barriers) are both significant in contributing to trade costs.

10. Some of these costs will be expected to diminish or disappear following KGZ accession to the CU. However other types of transactions costs can sometimes also be important in inhibiting trade, such as those arising from, for example, information barriers, contract enforcement and market distortions. Chapter 4 also provides findings these qualitative aspects of trading environment between Almaty and Bishkek, based on primary data collected using a small survey of 80 firms in Bishkek. These qualitative findings reaffirm the underlying affinities between the two cities, including factors such as language and culture, but they also indicate some potential areas where interventions may help strengthen the economic links between the two cities.

11. Chapter 4 also provides information about the development plans of Almaty and Bishkek. Under the recently approved plans of Government of Kazakhstan (KAZ), the focus of regional development within the country will be on increased size and economic density of urban clusters through agglomeration, combined with good links between urban clusters and their hinterland, smaller cities and rural areas. The plans target building Almaty (along with Astana and Shymkent) into a megacity (population in excess of 1 million); specifically increasing Almaty's population to 3.5 million by 2050, and national per capita income by a factor of five. Over a shorter span, till 2020, the proposed plans call for agglomerating Almaty with smaller towns in vicinity, and substantial investments in urban infrastructure and transport. This ambitious agenda, if realized, will contribute to significant growth in the size of Almaty's

economy. The information available for Bishkek's development plans is less specific on investments, but indicates a strategic thrust towards enhancing the business climate, greater transparency and improved governance to attract private investments into the city.

12. Based on this analysis of the ABC and its potential, the study concludes this may be a suitable option to pilot more substantive ECD efforts under the CAREC program.³ Amongst other things, this will require enhancing information exchange amongst stakeholders for the ABC and comprehensive, detailed analyses of specific sectors linked to development of the ABC. The last chapter outlines steps to be undertaken over the next 12 months to move forward the ECD agenda under the CAREC Program.

³ A parallel initiative to explore development of a domestic economic corridor in Tajikistan is also being undertaken. It is not included in the study here but will be merged into reports on ECD work under CAREC starting in 2015.

II. CAREC Corridor Development: Three Tracks

Combining space and function

13. A “*Corridor*” is a spatial concept. A corridor defines a space that is dedicated to or has increased density of activities towards particular function(s). This understanding is fundamental to appreciating the diverse uses of the term “corridor”. An air corridor, for instance, may be a designated air space within which aircrafts are confined during transit through a particular area, while a tourist corridor may refer to an area dominated by flow of tourists between specific tourism assets. Corridors are defined in a variety of context, from urban planning, to environment management to migration of animals to spread of communicable diseases. In each case, a corridor can generally be viewed in terms of “[function][space]”, or a space dedicated to or dominated by flow of the indicated function.

14. Even in the case of “transport corridors”, where one is most inclined to quickly equate it to a road, definitions often are in terms of networks that yield geographical areas where trips tend to cluster. The US Department of Transportation notes “A transportation **corridor** is defined as “a combination of discrete, adjacent surface transportation networks (e.g., freeway, arterial, rail networks) that link the same major origins and destinations”.⁴ In a related context, another definition of transport corridors states: “Broadly defined, a corridor generally refers to a geographic area that accommodates travel or potential travel. Normally, a corridor is considered to be a ‘travel shed,’ an area where trips tend to cluster in a general linear pattern, with feeder routes linking to trunk lines that carry longer distance trips in a metropolitan area.”⁵

15. Thus an “*Economic Corridor*” should not be conflated with a particular road. Using the function-space representation above, an economic corridor represents a geographical area encompassing a higher density or flow of economic activities. More functionally narrowly defined economic corridors may also exist, such as an information technology corridor, a biotech corridor or a halal-food corridor.⁶

16. In a similar vein, it can also be noted that development of economic corridors is not about building or promoting commercial establishments on the side of a particular road. Instead, as will be discussed further below, it refers to spatial organization of economic activity through linking such activities across space and increasing their density within a given space. Indeed, when assessing the potential for new investments towards enhancing economic activities, whether through public or private investment, existing infrastructure (roads, rails, power) is often better viewed as *sunk costs*, and thus irrelevant for the forward-looking investment decisions.

Three tracks for development of CAREC Corridors

17. In certain circumstances, difficult geographical terrain or sparse distribution of population and economic activities may imply that transport networks may be limited to a single road connecting two or more centers. This is certainly applicable to many parts of the CAREC region, and in these cases a corridor may in practice be limited to a single highway and limited

⁴ “Integrated Corridor Management Concept Development and Foundational Research”, Technical Memorandum, 2006, See http://ntl.bts.gov/lib/jpodocs/repts_te/14273.htm.

⁵ See <http://www.dot.ca.gov/dist2/planning/pdf/description.pdf>

⁶ An economic corridor may in fact have nothing to do with any road, as exemplified by some of the grand rivers such as the Congo and the Mekong rivers, that serve as economic corridors, supporting and sustaining a myriad of economic interchanges across communities separated by large distances, as they flow through their long course across national boundaries.

associated network. Nonetheless, it is important to keep in mind that corridors are best viewed in function-space terms and that even transport corridors may be more usefully perceived as networks. For a particular road, once it is built to high standards, there is not much scope for further “developing” the road except in terms of associated “software” such as signage, maintenance and governance, inter-operability with other transport systems, etc., issues that depend on specific functions served by the highway.

18. In the context of CAREC corridors and their development, three functions can be proposed for them: transport, transit and fostering economic activities.⁷ Development of economic corridors has been given high priority in the *CAREC 2020*, the long-term strategic framework of the CAREC program endorsed in 2011. This emphasis recognizes the twin objectives of developing these corridors, namely, (i) ensuring connectivity of member countries to enable movement of goods into the country at lowest possible costs,⁸ and (ii) creating jobs and economic diversification to promote inclusive economic growth and development.

19. With this context, the study proposes that development of CAREC corridors can pursue 3 tracks: (i) Track 1: ensure connectivity (within the country, within the region, and with outside the region); (ii) Track 2: enable smooth transit through countries; and (iii) Track 3: promote organization of economic activities to create jobs, increase productivity, strengthen economic clusters, and contribute to economic development of the country. The three Tracks can respectively be viewed as developing the function of CAREC corridors as *Transport Corridors*, *Transit Corridors* and *Economic Corridors*. While this reflects the function-space characterization of corridors, we note that in many geographic areas of CAREC, the Transport Corridors and the Transit Corridors may be only a single route rather than a network. At the same time, this reduction (to a single road) is unlikely to be meaningful in any context related to development of Economic Corridors.

20. It should also be noted that the 3 tracks above may not always be mutually consistent. In particular, T2 (Transit Corridor) is focused on point-to-point trips, with little role for anything in between. The focus of T3 (Economic Corridor) is on increased density and variety of economic activities in the corridor space, which would tend to conflict with the transit objectives of greater speed and reliability in point-to-point movements. It is also possible that improved point-to-point connectivity may hollow out areas in between the two points due to migration of people and economic activities towards the end points of the transit corridor. Given the CAREC corridors are covering vast distances, and recognizing that not each and every kilometer of each corridor would be suitable for all three types of development, the mutual inconsistency noted here does not preclude simultaneously approaching each of the 3 types of corridor development in different parts of a particular corridor.

T1: Transport Corridor

21. Development of domestic transport corridors and associated networks remains a high priority for member countries of the CAREC. The Central Asia region represents a large land area with vast distances and often sparse populations spread across difficult terrain, including mountains and deserts. Historically road transport was relatively underdeveloped with greater emphasis on rail transport since distances were large and domestic trade dominated by

⁷ This draws upon the framework for regional corridor development introduced in Srivastava (2013).

⁸ Also exports where relevant. The role of roads in exports is relatively small compared to other modes (pipes, railways), except for transit and for intra-regional trade. CAREC intra-regional trade has grown strongly but is quite small as a percentage of total international trade of the member countries, (Gill et.al. (2014).

movement of bulk commodities. Railways carried 89 percent of freight volume prior to World War II while road freight services were used as feeders for railways and in short-haul distribution, accounting for only 3 percent of total freight volume (Coulibaly et. al. 2012). The countries continue to mainly export bulk commodities but increasingly demand import of manufactured goods from Western Europe and the PRC, underlining the rapid growth in road transport. Since independence, two other factors have also contributed to high priority for development of transport corridors. One is the rapid deterioration in roads in most countries where the roads were designed for axle loads below international standards in Europe (Coulibaly et. al. 2012). The other is the strategic need for some countries to ensure domestic connectivity without having to go through a neighboring country.

22. The CAREC Program has recognized the high priority for ECD T1, with the overwhelming majority of investment projects targeted towards strengthening transport corridors; as of March 2014, nearly 80% of the \$22.3 billion of CAREC investments were in the transport sector. To put this in perspective, however, we should note that the originally identified six CAREC corridors comprised approximately 24,000 kilometers (km) of expressways or national highways. In 2007, 36% of the identified CAREC roads were in bad condition, indicating that 8,640 km would be targeted for improvement by 2017.⁹ This means that the first stage of corridor development, pure transport connectivity or T1, has been implemented for only 52% of the CAREC targets set in 2007.

23. In 2013, following a midterm review, the CAREC member countries endorsed at the 12th Ministerial Conference a refined version of the *TTFS 2020*. Since the *TTFS 2020* provides a comprehensive treatment of development of the Transport Corridors in CAREC, or T1 corridor development, this study does not pursue T1 any further.

T2: Transit Corridor

24. The importance of transit function of CAREC corridors stems from the fact that a majority of the member countries are landlocked, dependent on smooth, efficient and low-cost movement of goods through neighboring countries, particularly in acquisition of consumer goods and machinery for investment. To the extent the transit corridors by definition go through more than one country, they have aspects of “public goods”. Actions taken by one country can have positive or negative externalities for the neighboring country or countries, implying there is substantial scope for coordination and regional cooperation in ECD T2. At the simplest level, investment in good quality services at border crossing point (BCP) in one country may not provide any return if the border remains choked or high cost due to inefficiency in service standards from agencies of the other country sharing that BCP. Similarly, maintenance of road segments within one country, or road safety standards within one country, can have an impact on the attractiveness of the corridor as a whole in serving a transit role.

25. As with T1 corridor development, the CAREC program has recognized the need to promote efficient transit in the CAREC region and is implementing several initiatives in coordination with development partners to modernize customs procedures, develop single window operations in member countries, and improve the sanitary and phytosanitary (SPS) regimes in the region. The Corridor Performance Monitoring and Measurement (CPMM) system

⁹ The original CAREC Transport and Trade Facilitation Strategy and Action Plan had noted that in 2007, 64% of the CAREC road corridors were in good condition, 21% in fair condition, and 15% in bad condition. As such, improvements in the road corridors under the CAREC program would focus on the fair and bad road sections, i.e., 36% of the total length of roads in the six identified CAREC Corridors.

is also used to quantify parameters of the transit role of CAREC corridors. The refined *TTFS 2020* has substantial coverage of T2 corridor development, including pipeline of projects in medium term, and the present study therefore does not deal with this aspect of corridor development any further. However, corridor C1 is affected by the inclusion of both Kazakhstan and Kyrgyz Republic in the Eurasian CU, which will impact some of the border crossing points relevant to this corridor. In the next chapter we look at the impact of the Customs Union on the transit role of CAREC corridor C1.

T3: Economic Corridor

26. The third track for corridor development, Economic Corridor Development (ECD T3) — building on corridor connectivity to create jobs and promote economic activities — has received less priority under the CAREC program. However, ECD has been emphasized as priority area under the *CAREC 2020* framework. Creation of jobs and increasing economic activities are also priority for the member countries. Member countries are increasingly interested in the third aspect of corridor development, i.e. building on the connectivity being developed under T1 and T2 to promote spatial transformation, agglomeration and economic diversification. This will require also looking at using connectivity to support development of large urban centers that are also well connected to smaller urban centers as well as encompassing urban-rural links.

27. The spatial concept of corridors is relevant even more to T3 than to T1 and T2. Economic corridors or T3 development is concerned with the spatial organization of economic activities. Clustering of economic activities allows benefits from scale economies. This requires increasing the density of markets in economic clusters, and increasing the links between the markets both within clusters and across clusters of economic activities. Typically this would require good connectivity, through well-developed networks of major arteries and secondary roads, as well as other infrastructure necessary to attract private investment.

28. T3 is a new area for CAREC, but it addresses primary priorities of member countries, in terms of job creation, productivity growth and economic diversification. Thus, although T3 development is complex, and it may not be immediately applicable to all parts of CAREC corridors, it is recommended the CAREC program starts to look into possible applications of T3 in the region. The initial attempts do not necessarily have to be cross border, they can be domestic also. In either case, the lessons from initial applications can inform and refine other applications in the region whenever the concerned countries believe the timing is right to venture into T3 development.

29. Three stylized facts about economic corridors or T3 development are worth reiterating.

- First, no economic corridor is defined by a single road; instead, they tend to be defined by geographical space dominated by flow of targeted economic activities. Economic corridors are “post-connectivity” in that well-developed connectivity is a prerequisite to successful T3 development.
- Second, economic corridors encompass a constellation of connected markets that may in turn be linked to other markets outside the region. To the extent cities, and the regions around them, represent a hierarchy of markets, economic corridors represent networks of connectivity between a variety of markets— larger markets connected to smaller markets, markets within a sector trading inputs into final production, and markets for services.

- Third, it is difficult to conceive of successful T3 development based exclusively on public investments, with no role for private sector. Indeed, the role of public sector and public investments in T3 is preferably focused on maximizing the multiplier for private investment for every unit of public investment.

30. Experience with T3 development in other Asian countries (see Box 2.1) shows the need for sustained commitment and long time horizon. In Malaysia, for example, first plans for T3 development were initiated more than a decade ago, and T3 development remains a work in progress. The Malaysian experience also highlights the importance of high-level political commitment in pushing T3 development over time. The diversity of stakeholders in T3 development also implies interface between different government agencies as well as different levels of government, in terms of national, provincial and local. Countries need to find their own solutions to addressing these coordination and governance issues. In the case of Malaysia, specific bodies were set up for corridor development through acts of the Parliament. A more elaborate, four-tiered structure has been adopted for the Delhi-Mumbai Industrial Corridor (DMIC), which cuts across several provinces (states) of India. In Kazakhstan, a new Ministry of Regional Development was established to coordinate across different ministries involved with plans for development of various regions in the country, particularly with the planning for mega-cities such as Almaty and Shymkent (see Chapter 4).¹⁰

31. T3 development is a partnership between the government, providing catalyzing public investments, and the private sector whose investments ultimately determine the extent to which economic activities are generated. Effective partnership with the private sector requires extensive consultation between the private and public sectors, both upstream and downstream, at planning stage as well as implementation stages. Typically there is also a need for a large, “anchor” investor for the economic corridor. In the case of Malaysia, for example, the anchor investor role has been played by Petronas in case of Eastern Corridor and by Sime Darby for the Northern Corridor (Box 2.1). Additionally, the government brought together private sector, academics and other stakeholders in extensive “labs” at planning stages for the corridors. The emphasis on private-sector role is also manifest in the fact the corridor development authorities are staffed by people with private-sector background, whose dominant metric for assessing their performance is the extent of private investments brought into the corridors and the number of jobs created.

Box 2.1: T3 development in Asia: Lessons from Malaysia and India

Experience from Malaysia and India can provide useful insights for T3 corridor development in an Asian context. Malaysia’s corridor development is part of its overall regional development strategy for integrated spatial development and includes 5 economic corridors implemented through its national plans, of which 3 are in peninsular Malaysia: the Northern Corridor Economic Region (NCER), the East Coast Economic Region (ECER) and the Iskandar Malaysia. The corridors were initiated in the 9th 5-year plan in 2005. In addition to the central planning agency, each corridor also has its own implementing authority; for the 3 corridors in peninsular Malaysia, these are the Northern Corridor Implementing Authority, the East Coast Economic Region Development Council and the Iskandar Regional Development Authority respectively. Each of these has been established through legislative acts of the parliament to coordinate implementation of the respective corridor development across

¹⁰ The ministry has been absorbed into the newly created Ministry of New Economy in the latest reorganization of the government in July 2014.

Box 2.1: T3 development in Asia: Lessons from Malaysia and India

different government agencies at the central and provincial levels. The corridor development authorities are organized in the form of an apex steering entity co-chaired by the Prime Minister and a Chief Minister, the head of provincial government; the focus is on legislative and policy issues to support the corridor's development. These are supported by an entity focusing on approval processes and headed by the Chief Minister with participation from central government and state government that acts as a "one-stop-center" for private investors. Project implementation and day-to-day administration is supervised by the corridor-development authority.

Customization of the corridors to local advantages is important, while retaining the overall framework of national development priorities. Corridors are designed to build on existing strengths and resources as well as economic growth potential within the corridor region. The Iskandar Malaysia focuses on industries like electrical and electronics, petrochemicals, and health care while the Northern Corridor focuses on agriculture, logistics and tourism. Common to all the corridors however is an emphasis on it being private-sector driven. Amount of private investment mobilized along with number of jobs created are two of the key-performance indicators for these corridors, which implicitly compete in obtaining public resources and attracting private investment though in differentiated economic areas of emphasis.

Each corridor has a large company that is an anchor investor for the corridor, and there may be more than one anchor investors. The anchor investors in Malaysian corridors also participate in consultations with government during corridor development planning aside from implementation of projects. Private sector was also a key stakeholders in strategic visioning and analysis of priority sectors and business areas.

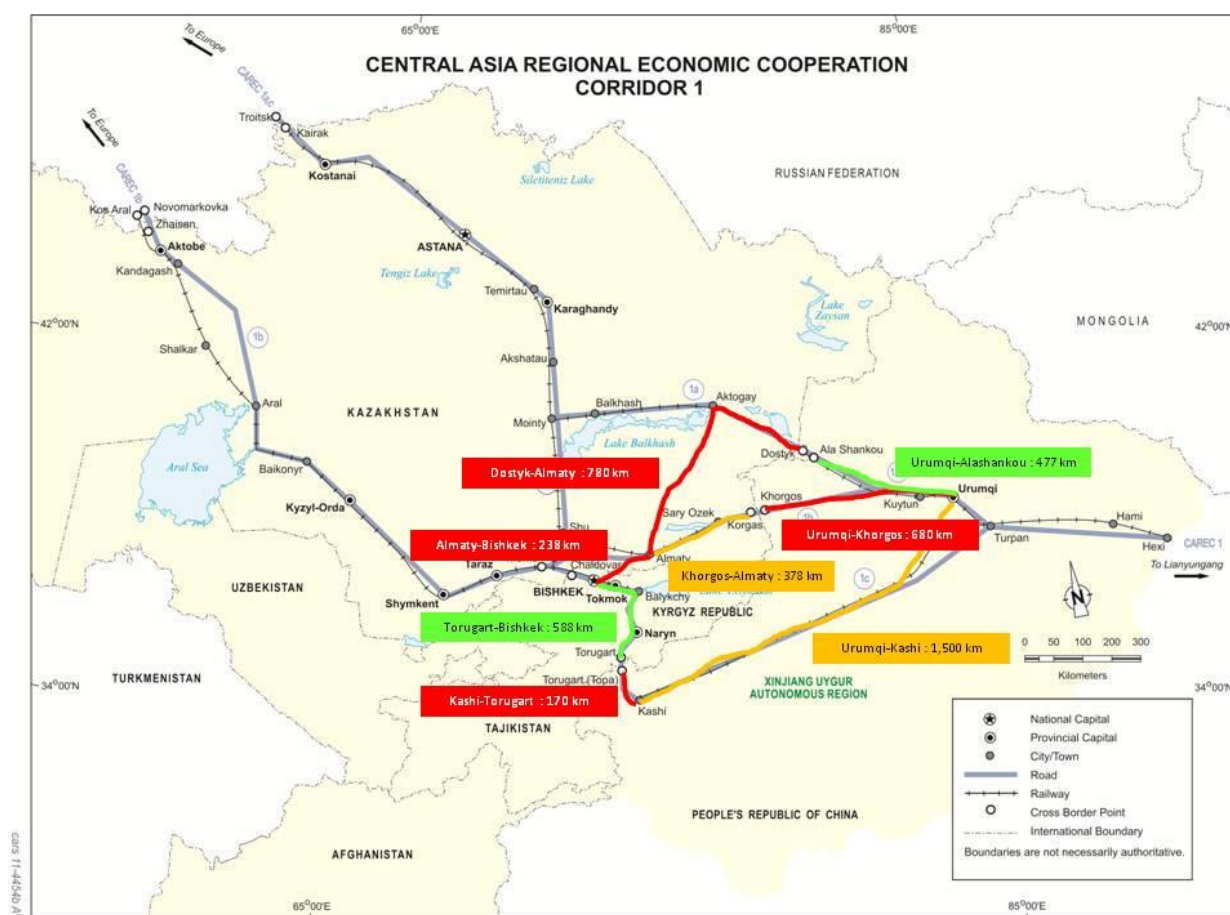
The Delhi-Mumbai Industrial Corridor (DMIC) grew out of an initial vision of the Government of India to develop a 1483-km long Dedicated Freight Corridor between the two cities offering high-speed rail connectivity for heavy-axle load wagons. The DMIC was envisaged along this freight corridor to optimize on the connectivity offered and a band of 150 km to 200km chosen on both the sides of the freight corridor to be developed as the Delhi-Mumbai Industrial Corridor. Corridor plans call for investments exceeding \$80-90 billion.

A four-tiered structure has been adopted for the governance of the DMIC, with a Steering Authority headed by the Finance Minister with concerned Central Ministers and Chief Ministers of respective

III. Track 2: Transit and CAREC Corridor 1

32. Corridor 1 is an important transit route in CAREC: it passes through three countries, namely PRC, KAZ and KGZ, with a major portion in KAZ. Corridor 1 has three sub-corridors. **Corridor 1a** connects Urumqi to Astana and onwards to Russia, and is primarily a railways corridor. **Corridor 1b**, also known as the 'Western China-Western Europe' corridor, stretches 2,787 km within KAZ, passes through Urumqi, Khorgos, Almaty, and heads westwards until it crosses Zhaisan into Russia. **Corridor 1c** links PRC and KGZ through the Torugart BCP. Corridor 1 provides the foundations for strong road and rail connectivity of 2 important cities in CAREC, Almaty and Bishkek, to each other and to trade with PRC.

Figure 3.1: CAREC Corridor 1



Source: ADB

33. An overwhelming majority of trade in goods moves via railways in the region. Despite low service level and frequent operational challenges, railways is the cheapest possible mode of transport, suitable for transport of low value density products over the long distances characterizing the region. In the context of CAREC corridors development, however, we focus here only on movement of goods along road corridors, implying subcorridors 1b and 1c in the present situation. There is little trade in low value density or bulky goods, such as coal, wood, fuel between Almaty and Bishkek, thus road is the dominant mode of transport between Almaty and Bishkek.

34. Together subcorridors 1b and 1c play an important transit role, providing alternative and active routes for import, transit and distribution of Chinese goods in the region. Despite being longer and with more difficult mountainous terrain, Corridor 1c has benefited from easier and cheaper border crossing into KGZ compared to Corridor 1b that uses BCPs with KAZ, which is a member of the Eurasian CU. The different trade regimes between KAZ and KGZ BCPs had important implications, particularly the evolution of Dordoi in Bishkek as a large market for regional distribution of goods and the dynamic growth of KGZ garments industry, both of which support employment of thousands of persons.¹¹

35. As noted in Chapter 2, the first two tracks for CAREC corridor development (T1 and T2) are already an integral part of the program, covered under the latest TTFS 2020, and are thus not addressed in this study. However, we look at the transit role of subcorridors 1b and 1c since it is inextricably linked to organization of economic activities, particularly in Bishkek. A key question is how the KGZ accession to the CU will affect the transit and movement of goods along the subcorridors, including imports from the PRC through Almaty and Bishkek, and the economic activities associated with the existing patterns of transit of goods. This is an important question for Bishkek, its economic role in the region, and the potential development of Almaty Bishkek Corridor over time. It is also a good example of how government policies can affect the development of corridors, both in terms of their transit role and as economic corridors.

36. The next two sections review the connectivity between Almaty and Bishkek relating to movement of goods between the two cities, followed by analysis of the arrangements and costs associated with transit of goods along the subcorridors 1b and 1c, from PRC to Almaty and to Bishkek. This is followed by an assessment of changes that may be expected based on discussions with transporters, freight forwarders and business associations in Bishkek and Almaty during July 2014.

1. Almaty–Bishkek connectivity

37. The Almaty – Bishkek road is 240 km long, has one significant physical barrier – Korday pass (1220 m above sea level) and one non-physical barrier – BCP Korday (for passenger transport only) or BCP Karasu (passenger and cargo traffic).

38. Driving time between the cities depends on queuing and processing time at the BCP Korday, road conditions, especially on Korday pass, and traffic jams at the western outskirts of Almaty. A 4-hour total door-to-door transit time¹² can be considered quite reasonable for a passenger car. After Kazakhstan's accession to the Customs Union, border control procedures were tightened and processing time increased for pedestrians, private cars and cargo vehicles. Currently (2014) crossing the border within 30 min by private car would be considered fast: 1-2 hours is quite common. Pedestrian crossing is normally faster than private car crossing, and

¹¹ Dordoi was established 1992. Its strategic location at the northern border of Bishkek city, just 10 km from the Kazakh border, combined with most liberal regimes for trade and customs clearance in Central Asia, helped it achieve dominant role in regional trade. Most traders in Dordoi are small wholesalers; accordingly Dordoi contributes approximately 50,000 jobs to Kyrgyz economy. Dordoi market had essential facilitating role in developing Kyrgyz apparel production cluster, which now accounts for approximately 100,000 jobs in Kyrgyzstan. Regional traders used to buy small quantity of Kyrgyz clothing to increase their product line offering. While most of the goods purchased in Dordoi would be goods of Chinese origin, initial piggybacking of relatively small volume of Kyrgyz product helped apparel sector to develop over time and start developing independent from Dordoi trade and logistics channels.

¹² Including border crossing time at BCP Korday – Ak-Jol or at BCP Karasu – Ak-Tilek.

many travelers prefer to hire local taxi to the border, cross the border by foot and hire a car on the other side of the border.

39. The corridor between Almaty and Bishkek is used for both bilateral trade and re-export of foreign goods. Almaty traders and distributors have larger scale than Bishkek companies and control regional distribution of more expensive durable consumer electronics, imported food and consumer goods. Except consumer electronics that need after-sales support, the Almaty traders generally do not have operational branches in Kyrgyzstan. Traders from Kyrgyzstan thus buy goods in Almaty and deliver to Bishkek themselves. In turn, Bishkek is the re-export hub for less expensive goods, which are overwhelmingly of Chinese origin. Goods from other countries, mostly Turkish and South Korean products are also moved through re-export channels. Bishkek has a number of trade centers, but the Dordoi market dominates this business.

40. Daily traffic pattern is affected by the largest wholesale market in Central Asia—Dordoi. Traders and shoppers cross the border from Korday to Bishkek in the morning and return after lunch with merchandise. The number of people crossing increased dramatically after the Customs Union was established and procedures for moving merchandise across the border tightened.¹³ This was reflected in tourist arrivals into KGZ, which rose substantially during 2011 and 2012 after transition in 2010 (Table 3.1).

Table 3.1: International tourist arrivals into Kyrgyz Republic 2007–2012

2007	2008	2009	2010	2011	2012
1,656,000	1,844,000	1,394,000	855,000	2,278,000	2,406,000

Source: World Bank; <http://data.worldbank.org/indicator/ST.INT.ARV.L>

41. In 2014, all commercial freight traffic was moved to newly re-opened BCP Karasu – Ak-Tilek. Commercial trucks serve needs of Kazakh-Kyrgyz bilateral trade, transit of Kyrgyz goods through Kazakhstan to Russia; and Russian and European goods through Kazakhstan to Kyrgyzstan. Despite some inefficiencies of the border clearance process, which can result in queues and delays, this border crossing shows very good time-cost performance, compared to the rest of the region. During interview, Kyrgyz traders, except apparel exporters, did not express significant complaints about transport across the border. Full truckload with total value of goods in the range of US \$50,000–100,000 can be transported door-to-door from Bishkek to Almaty at US\$500–700, which is approximately 1% of the cargo value. But transport cost as percentage of cargo value would be higher for low density products and can reach five percent or more cent for products such as fruits and vegetables.

42. Since KAZ and KGZ are both members of the **CIS** Free Economic Area, there are no customs duties for goods exported from Kyrgyzstan, but customs control and clearance still needs to be done. Traders have a choice to do customs clearance on arrival at the final destination or at the border. Clearance in Korday is normally cheaper, as brokerage fees are lower than in Almaty. In addition, it allows Kyrgyz exporters' representatives to control the process better, as BCP Kordai is only 15 km from Bishkek. With Kyrgyzstan's accession to the Customs Union, this cost and all delays associated with customs control and clearance will disappear. This in turn, can drive down road transport tariffs, as truckers will be able to complete more round trips within any given time period.

¹³ Travelers are allowed move up to 50 kg of personal items with value up to \$1,500 without declaring. Accordingly, commercial consignments are split into 50 kg parcels and hand carried by shuttle carriers. Such people can cross the border many times per day.

2. Movement of goods to Almaty and Bishkek from PRC

43. Although they are common merchandise along this corridor, Chinese consumer goods are not transported in a transit mode through Kazakhstan and Kyrgyzstan by road freight transport. Such merchandise is delivered to Almaty via BCP Khorgos, and to Bishkek via BCP Torugart *independently from each other*. Goods which arrive in Bishkek via BCP Torugart are normally cheaper than goods that arrive in Almaty via BCP Khorgos due to cheaper logistics costs. Accordingly, they are re-exported in Customs Union via Dordoi market and account for majority of the shipments, hand-carried by the “tourists” through BCP Kordai. Table 3.2 shows volumes of goods moving from PRC via the Kazakh-PRC BCPs Khorgos and via the Kyrgyz-PRC BCP Torugart. The ratio of export from PRC to imports into PRC through roads is severely asymmetric, implying considerable challenge from empty reverse hauls and one-way demand for trucks.

Table 3.2: Movement of Chinese consumer goods through Kazakh and Kyrgyz CAREC Corridor 1 road BCPs, 2012

Border Crossing Point	Export from PRC (tons)	Import into PRC (tons)
Horgos (PRC – KAZ)	791,100	26,100
Torugart (PRC – KYR)	405,500	29,400

Source: PRC Customs

44. Interviews with traders and transport operators in Almaty and Bishkek helped identify major processes and cost difference between the two cities in terms of the logistics of trade with PRC.

- Trade logistics process begins with purchase of goods from Chinese suppliers – goods are purchased in Urumqi or in the major East coast trade hubs – Shanghai, Guangzhou, etc. Larger volume traders tend to skip Urumqi and go straight to purchasing from major national trade hubs. Internet search and purchasing are widely used when dealing with PRC suppliers.
- Large volume shipments (a multimodal container or more) are delivered by rail to Urumqi, where they are loaded on trucks for further delivery to Central Asia. Starting from here the process of delivery to Almaty and Bishkek splits.

Trade Logistics process in the corridor Khorgos – Almaty

45. Kazakhstan trucks are legally allowed to collect cargo in Urumqi and transport it to final destination in Almaty or other locations. In practice however, a majority of runs are accomplished with transloading at Horgos: Chinese trucks are normally used to deliver goods to Horgos (PRC), Kazakh truck for transport from Horgos to Almaty. Goods are transported door-to-door by so called Authorized Economic Operators (AEO), which is apparently a tightly guarded community of around 60 companies with approximately 400 trucks in operation between Urumqi and Almaty. The AEOs provide the following:

- Collect consolidated cargo in Urumqi. Clients can transport relatively small shipments, thus each truck can contain cargo of several clients. Clients are expected to pay US \$800-1000 per cubic meter for full delivery of customs cleared cargo in the

AEO's terminal in Almaty. In international shipping terms that would mean Delivery Duty Paid¹⁴ (DDP).

- All shipments within a consolidated truck go under one invoice and are cleared with one customs declaration. Based on the documents, the AEOs are considered to be the holder of title for goods.
- When goods arrive in Almaty, the AEO invites the trader to collect goods. As, according to documents, goods belong to the AEO, fake sales transaction need to be made – the trader can transfer money as if the goods were purchased and the AEO later returns the same amount in cash.

46. These AEO are normally referred to as “Cubovschik”, which means someone who transports goods by cube (LTL), rather than full trucks (FTL). These companies existed before the Customs Union and in 2010-11 appear to have charged 3 times less per cube than in 2014. Increase of customs duties, tightening of control at the Customs Union borders, especially in Khorgos, resulted in increase in their costs, but did not eliminate them from the logistics process. It is estimated that logistics costs paid by traders for transport of one truckload of merchandise delivered through this scheme is around US \$80,000–100,000 per truck. Contrasted with estimated value of duties in the range of US \$60,000–70,000, cost of transport in the range of US \$5,000 and approximately same value of official and unofficial expenses, the logistics providers seem to enjoy a good profit margin for every transaction, explaining why the group is well guarded and difficult to enter into by outsiders. Although there was a crackdown in 2011 when a large number of customs and National Security people were jailed, it appears the result was not elimination of such profitable arrangements but instead greater complexity and costs for traders.

Trade Logistics process in the corridor Torugart – Bishkek

47. Kyrgyz operators do not have freedom of access to Urumqi and must follow a two-step transportation process:

- First, Chinese road carriers deliver goods to Topo terminal, which is located approximately 110 km from BCP Torugart, where goods are unloaded, thoroughly checked, repacked and loaded onto Kyrgyz trucks. According to Kyrgyz traders, the main purpose of these checks is to ensure bad quality merchandise does not leave the territory of the PRC. No unofficial fees are paid on the PRC side.
- Documents check and weight control is performed at the BCP Torugart (KGZ). Trucks are not normally opened for physical inspection. Comparatively small “tea money” may be paid at the border, which normally does not exceed US \$200.
- Upon arrival in Bishkek, goods are delivered to the customs terminal at Dordoi market. After document control and physical inspection, they are customs cleared and are ready to move through the distribution chain, which begins in Dordoi, but can end up everywhere in Kyrgyzstan, Kazakhstan, Russia and other Central Asian countries.

¹⁴ According to INCOTERMS 2010 classification.

48. Total logistics cost from Urumqi to Bishkek is estimated at US \$12,000 and includes:

- Road transport cost of US \$5,000
- Terminal costs in Bishkek, official and unofficial – not exceeding US \$250
- Customs tariff – at the rate of US \$0.35 per kg, which for a 20 ton payload truck is equal to US \$7,000. VAT is not paid.

49. These calculation make evident the Kyrgyz corridor currently has a substantial logistics cost advantage over the Kazakh corridor. This difference helps explain the volume of people and merchandise shuttle traffic from Kyrgyz to Kazakhstan across the border. Since 2011, when this flow of people with small shipments began, border control procedures were gradually tightened, similarly increasing the costs of “leaking” merchandise across the borders and decimating cost advantage of Kyrgyz corridor over the Kazakh one. With higher border crossing barriers and greater enforcement since establishment of the CU, sales volumes in Dordoi have also shrunk drastically according to Kyrgyz clothing producers.

3. Trade, Transit and CU

50. An immediate impact of the CU will be on the BCPs and on the cost of importing goods. We consider each in turn below.

51. The CAREC CPMM initiative has collected detailed information about time and cost of transport along CAREC corridors since 2010. Table 3.3 shows the existing time and cost of border crossings at BCPs for KAZ-PRC, KGZ-PRC and KAZ-KGZ on Corridor 1. BCP Torugart shows quite reasonable overall performance, comparable with time-cost performance of Kazakh- Kyrgyz BCP Karasu – Ak-Tilek, and much lower costs and time than BCP Khorgos.

Table 3.3: Average Time and Cost of Freight Truck Border Clearance at CAREC Corridor 1 BCPs, 2013

Border crossing point	Main traffic flows	Time to clear exit BCP (hrs)	Time to clear entry BCP (hrs)	Total time to clear border (hrs)	Cost to clear exit BCP (\$)	Cost to clear entry BCP (\$)	Total cost to clear the border (\$)
Horgos (PRC) – Khorgos (KAZ)	Import of PRC consumers goods	28.2	11.2	39.4	447	336	783
Torugart (PRC) – Torugart (KYR)	Import of PRC consumers goods	0.2	2.8	3.0	0	73	73
Ak-Tilek (KYR) – Karasu (KAZ)	Export of Kyrgyz goods to Kazakhstan and third countries	0.8	1.6	2.4	27	77	104
Karasu (KAZ) – Ak-Tilek (KYR)	Transit of Russian and EU goods to Kyrgyzstan	1.4	0.5	1.9	82	21	103

Source: CPPM Annual Report 2013

52. It is expected the performance parameters above will change with KGZ accession to the CU. Table 3.4 below shows changes on the KAZ–Russian BCPs following the accession of KAZ

to the CU. The time at the BCPs dropped significantly after the CU, while the time spent at BCPs with non-members of the CU increased.

Table 3.4: Time to clear border crossing points before and after establishment of the Customs Union, in hours

		Before 1 July 2011	After 1 July 2011
Exiting Kazakhstan			
To Russia	Kazakhstan side	7.7	2.9
	Russia side	7.7	1.8
To Non-CU countries	Kazakhstan side	8.1	13.0
	NCU side	4.3	7.0
Entering Kazakhstan			
from Russia	Kazakhstan side	5.8	2.1
	Russia side	7.8	1.5
from Non-CU countries	Kazakhstan side	10.4	10.6
	NCU side	8.6	21.5

Source: CPMM Annual Report 2012

53. Since main saving in time to clear the border between CU members come from elimination of customs control, similar effect will likely occur on the Kazakh–Kyrgyz BCPs. On the other hand, external CU BCPs will experience tighter and lengthier control than before the CU. This would be expected at the Kyrgyz–Chinese BCP Torugart, after Kyrgyz accession to the CU, where the current processes do not comply with procedures of the Customs Union. Customs duties for consumer goods, imported from PRC, are levied by weight. Goods are not classified and not valued. In the Customs Union, clearance will be by product customs codes and value, which will complicate the process and increase its time.

54. For the transport route via BCP Torugart to stay more competitive than Khorgos after the KGZ accession to the CU, it will be important to ensure the transition from current to new mode of operations in the BCP Torugart is fast and efficient and time and costs performance does not deteriorate significantly,

55. The impact of adopting CU tariffs is potentially quite adverse for the transit of goods on the KGZ–PRC corridor through Torugart, and for the role of Bishkek and Dordoi in regional wholesale trade. Several firms interviewed for this study speculated that after Kyrgyz accession to the Customs Union, Kyrgyzstan will have to adapt similar customs tariffs and procedures as in Kazakhstan, with the result the logistics cost differential will disappear. Moreover, road corridor from Urumqi to Bishkek via Kashagar and the Torugart pass with altitude of 3750 m above sea level will result in higher transport costs than in the Urumqi–Khorgos–Almaty route.

56. As shown in the previous section, logistics costs for a 20 ton payload truck are estimated at US\$80,000–100,000 in the corridor Urumqi–Khorgos–Almaty, and only US\$12,000 in the corridor Urumqi–Torugart–Bishkek. Often trucks have higher payload capacity, and trucks used on the Kyrgyz corridor normally carry heavier load than trucks in Kazakhstan. Using again a 20 ton payload as a basis for comparative costs analysis, and using the rates for CU tariffs, the logistics cost for shipment of a cargo truck from Urumqi to Bishkek will increase as shown in Table 3.5.

Table 3.5: Total Logistics Cost for Import of Chinese Consumer Goods to Kyrgyz Republic, under Existing Tariff Versus Customs Union Tariff

Logistics cost component	Current (\$)	Under CU tariff (\$)
Transport costs Urumqi – Bishkek	5,000	5,000
Customs tariff	7,000	54,000–81,000
VAT (12%)	Included in tariff	6,000
Total	12,000	65,000–92,000

57. These preliminary estimates show that the Kyrgyz corridor will likely lose the obvious cost advantage over the Kazakh route.¹⁵

58. The resulting scenario can be summarized as below:

- Higher logistics cost in the Kyrgyz corridor will result in further reduction of wholesale trade in Dordoi and significant reduction of transit via Kashagar–Torugart–Naryn–Bishkek corridor
- High sales price and low sales volumes in Dordoi will divert international traders from Kyrgyz. This will reduce sales exposure of Kyrgyz apparel industry, which developed largely with help from the Dordoi market
- Reduction of employment in apparel production sector, wholesale trade (Dordoi), road transport sector
- Increased poverty and social tensions, which can damage Kyrgyz investment attractiveness and slow down economic growth.

59. There are however other factors that may mitigate the adverse scenario outlines above, and provide grounds for guarded optimism about the future of the Kyrgyz–Chinese road corridor and wholesale trade based on re-exports from the Dordoi market. These include:

- Transport and logistics costs are much lower in Kyrgyz than in Kazakhstan.
- Transport operators have become used to smaller margins – US\$500 per trip is considered reasonable, while Almaty companies may not accept a job unless it brings US\$3,000-5,000 per trip. Similar comments about profit margins were received from Kyrgyz producers, while profit margin of 15% is quite acceptable in Kyrgyz, Kazakh traders are reluctant to accept anything below 50%.
- Irrespective of the logistics costs, Dordoi represents substantive human and institutional knowledge capital from its history as the major trading hub of Central Asia, with strong connections to supplier base in PRC, Turkey, Korea, etc., good market knowledge, and strategic location in the middle of the most economically active part of the CAREC Corridor 1. In 2013–2014, Almaty administration started phasing out the Barakholka wholesale market, which was the major competitor of Dordoi for two decades. Reopening the border with Kazakhstan, after Kyrgyz accession to the CU, may help Dordoi revive and further increase its role in the regional trade, since the competitiveness of Chinese exports into the region will continue as will demand for the same.

¹⁵ This is reinforced by the fact the estimate of \$6,000 for VAT in the table may be an underestimate, though it is based on inputs from customs brokers in KAZ. This figure implies a total cargo value of a 20-ton truck of \$50,000 or about \$2.5/kg, which may be on the low side. A higher value would imply correspondingly higher VAT charges unless the trade declares less than the full value.

60. Dordoi played important role in development of Kyrgyz apparel sector and still plays important role as an essential element of sales and distribution chain for this sector. Based on the preliminary analysis, there is no obvious answer as to the future of Dordoi and the Kyrgyz–Chinese transportation corridor. Given the importance of this for the KGZ economy, it will be important to monitor the effects in the short to medium term along with a more detailed analysis of potential impact of Kyrgyz accession to the CU. A key challenge for such analysis is low transparency of logistics processes between PRC and Central Asian Republics.

61. In conclusion, transportation between Bishkek and Almaty for most types of goods is not considered by traders a big challenge. With Kyrgyz's accession to the CU, costs and delivery times will reduce further between Almaty and Bishkek. In contrast, clothing and other consumer goods, which are cleared in Kyrgyz at a very low tariff currently, have experienced significant barriers at the CU border (KAZ). The pressure on re-export of consumer goods has thus seen reduction in trade volumes of such goods in Dordoi market. As the CU authorities establish a barrier for re-export of Chinese consumer goods via Dordoi, tight procedures and higher costs for moving goods across the CU borders will affect Kyrgyz producers of apparel as well. While there is good potential for stronger economic cooperation between Almaty and Bishkek, especially after Kyrgyzstan's accession to the CU, potential collapse of Dordoi can slow down this process or even revert it. It is recommended options be explored to facilitate transition of Dordoi to a productive role in the new environment.

IV. Almaty–Bishkek Corridor: An Exploration

1. Introduction

62. In the context of Central Asia's vast distances, the cities of Almaty and Bishkek are virtually twin cities, separated by a distance of less than 250 kilometers. The two cities are physically connected by a part of CAREC Corridor 1b, complemented by strong commercial, cultural and historical links. The two cities are also amongst the largest in their respective countries: Almaty, with a population in excess of 1.5 million is the commercial capital of Kazakhstan while Bishkek is the political capital of the Kyrgyz Republic with a population rapidly approaching 1 million. Each city is also characterized by the highest per capita income within its respective country. It is difficult to identify a comparable cross-border pair of cities in the region with such proximity and potential for growth through regional cooperation.¹⁶

Box 4.1: Economic activities linked to the ABC: Overview

Almaty and Bishkek are linked by formal and informal trade in goods along the Corridor 1, and trade in services. Much of the flow of manufactured goods is transit trade. Informal re-exports of consumer goods from PRC through Bishkek and Almaty, as discussed in Chapter III, is a dominant component of the transit flows. Official exports from Kazakhstan to Kyrgyz Republic (along Corridor 1 only) were about US\$100 million in 2013, dominated by tobacco and some prepared foods. Trade flows in opposite direction include mostly traditional Kyrgyz exports – garments, fruits, vegetables and dairy products, and likely include a substantial transit component. Official statistics show a sharp increase in Kyrgyz exports to Kazakhstan for garments and fruits and vegetables from very low levels before 2010 to more than \$150 million in 2012 and 2013. This may be linked to the CU and the associated strengthening of customs administration on the Kazakhstan-Kyrgyz border: it is easier for Kyrgyz businesses to find a partner in Kazakhstan to facilitate border crossing into the CU, indicating dominance of transit trade in these flows (Mogilevskii and Akramov (2014)). Other substantial official transit flows along the corridor reflect movement of Chinese and European products going via Kazakhstan to Kyrgyz, Tajikistan and Afghanistan as well as some Kazakh exports to Tajikistan and Afghanistan. These transit flows are related to Almaty's role as regional distribution center.

Direct bilateral trade between Almaty and Bishkek may thus be dominated by trade in services, including intra-sector trade, and in primary products. Aside from fruits and vegetables, anecdotal evidence suggests considerable informal exports of Kyrgyz meat and live animals (cattle, horses and sheep) to Kazakhstan, despite a ban on exports of products of animal origin from Kyrgyz to the CU countries. Tourism, finance, health and education are important sectors for trade in services between the two cities. There are considerable flows of Kazakh tourists to Issyk-Kul and Kyrgyz travelers catching flights from Almaty airport or trains from Shu station. Due to its economic size, Almaty specializes in more sophisticated capital intensive and expensive services (e.g. high-tech medical services), while Bishkek offers more affordable alternatives for services, which do not require expensive personnel and equipment (e.g. dental care and some types of tertiary education). Repair of cars is also a noticeable service exported from Bishkek to Almaty. Tertiary education is another example of intra-sector trade between Almaty (expensive, recognized brands) and Bishkek (affordable quality).

¹⁶ Possible examples may be Tashkent and Shymkent, with a distance of 126 kilometers, and Tashkent and Samarkhand with a distance of 344 kilometers. Being in the same country, the distance between Tashkent and Samarkhand can be done in less than 3 hours by high-speed train. The border between Tashkent and Shymkent is considered relatively "thick" in comparison to that between Almaty and Bishkek.

63. This chapter provides an assessment of the extent to which this potential can be utilized to develop an economic corridor between them. In terms of the framework for corridor development introduced in Chapter 2, the ABC is an example of the T3 corridor development. ECD T3 aims at leveraging existing connectivity to promote economic activities in the relevant areas through developing economic clusters such as cities, increasing the density of economic activities in these clusters, and reducing economic distances amongst businesses and workers in the cluster areas and between them. As also noted in Chapter 2, an economic corridor does not make sense without underlying economic potential that it can channelize, magnify and build upon. The present analysis of the ABC can thus be viewed as having two objectives: (i) to assess the economic relevance of the ABC: does it have any potential and economic content to justify a substantial commitment of resources and efforts to develop an economic corridor?; and (ii) what may need to be done to move forward if the answer to the first question is affirmative.

64. An overview of the economic profile of the corridor is a first step in assessing the economic relevance and potential of the ABC; this is provided in section 2. Not surprisingly, the economic anchor for ABC is centered on the endpoints, namely the cities of Almaty and Bishkek, whose economies are also briefly reviewed. Economic links between these two are then analyzed in section 3. The extent to which the cities are already well integrated is an important element and determinant of the potential of ABC as an economic corridor. It will also affect for example, whether the KGZ accession to the CU can be expected to have any impact on how the two cities are linked. If the barriers or costs to trade between them are already low, the CU will not have much effect in lowering them further. Almaty and Bishkek have long had economic links and anecdotal evidence suggests even today there is active exchange between the two along both formal and informal channels of trade in areas like meats/livestock, construction materials, banking sector and tourism. There are geographic clusters, such as Issyk-kul and Korday along with Bishkek, with significant business links with cities in Kazakhstan like Almaty.

65. Barriers to trade may arise from several types of costs such as tariffs and non-tariff barriers, transport costs, administrative hurdles, contractual frictions leading to transaction costs, costs of finance (e.g. trade finance), corruption, wholesale or retail distribution costs, or even the market structure of the trading sector (e.g. monopoly or collusion in transport of goods). Three approaches have been used to analyze barriers to trade between two entities (countries, regions or cities):

- Direct measurement of barriers, such as CPMM data on time and costs at BCP (discussed in chapter 3);¹⁷
- Using trade flows to infer trade costs—estimate a gravity model on observed trade flows and determine if the trade flows between the two entities are comparable to some benchmark based on the estimated equation; and,
- Using price dispersion and price gaps to infer trade costs—this utilizes the idea that prices should be linked closely if trade costs are negligible. The analysis here utilizes the third approach, which has been less frequently used, and looks at comparative price behavior to assess economic links between Almaty and Bishkek.

66. The quantitative analysis of economic links is supplemented in section 4 by a more detailed look at the qualitative aspects of the trading environment characterizing transactions between Almaty and Bishkek. This is based on primary data collected from a small survey of 60 firms in Bishkek. The survey, conducted in July and August 2014, focused on firms that were

¹⁷ For other approaches to direct measurement of trade costs, see Hummels (2007) and Olken and Barron (2009).

involved in transactions with businesses in Almaty and other cities in Kazakhstan such as Taraz and Shymkent. It aimed at providing a qualitative understanding of other types of costs that may characterize trade between the two cities, such as contractual costs arising from issues related to information, risk sharing and enforcement.

67. Although not estimated, the well-known gravity model for trade is a useful context to frame the analysis of Almaty–Bishkek links and the ABC presented here. Gravity models specify the trade between two economies as directly related to the size of each economy (GDP) and inversely affected by trade costs, typically measured by the distance between the two. In simplified terms, the gravity model for trade between two economic regions i and j with incomes E_i and E_j and separated by distance d_{ij} can be written in stochastic form as below.

$$\ln X_{ij} = a_0 + a_1 E_i + a_2 E_j + a_3 d_{ij} + b V_{ij} + \mu_{ij}$$

68. The a_i 's are parameters, as is b (which may be vector depending upon V), while μ_{ij} denotes the error term. Since the distance is a proxy for trading costs, different studies have used a variety of variables in vector V to augment the basic gravity model to better capture other elements of trading costs.¹⁸ These have included variables such as common language, shared borders, per capital GDP, shared colonial history, common membership in regional trading arrangements, common currency, quality of the connecting infrastructure, and even a measure of generalized remoteness from all other potential trading partners.

69. In terms of the equation above, this study looks at the ABC and the economic links between Almaty and Bishkek by focusing on three sets of issues, namely factors and initiatives that may increase E_i , increase E_j , (i.e. incomes of the two cities Almaty and Bishkek), or decrease effective economic distance between the two cities through augmenting variables V . Several variables noted above, such as common language, shared border, membership in regional trading arrangements, shared history etc. are already a given in the case of Almaty and Bishkek, suggesting the likelihood of greater trade between the two than would be predicted by a basic gravity model. However, there are other possible augmenting variables that may lead to frictions or greater trading costs, and some of these are explored using the primary survey data, such as barriers arising from information costs, inadequate access to mutually acceptable standards and certifications, and concerns about contract enforcement. Policies and initiatives that mitigate these trade costs between the two cities will promote greater links and facilitate ECD T3 along the ABC. Similarly, the accession of KGZ into the CU has the potential to reduce trade costs and thus boost the ECD T3 potential for ABC.

70. Within this framework, another important element with positive implications for the development of ABC as an economic corridor is the recent decision by the government of Kazakhstan approving plans for regional development in the country through spatial transformation of the economy, anchored on development of megacities (population in excess of 1 million) that are connected well with one another and with smaller cities and rural hinterland around the urban agglomeration. Initially 4 megacities have been proposed for development: Almaty, Shymkent, both in proximity of Bishkek, Astana and Aktobe. The plans envisage Almaty becoming integrated with some of its satellite towns, transforming from a monocentric city into a polycentric urban agglomerate, and diversifying economically, including higher-value manufacturing and services. This will lead to greater mass for the city in the framework of the gravity model above, implying greater potential for the ABC.

¹⁸ Anderson and van Wincoop (2004) provide a detailed treatment of gravity models.

71. Consequently section 5 considers available information on development plans for both Almaty and Bishkek to assess potential development of the endpoints of the ABC. The objective is also to identify, to the extent possible, potential for synergy and possible interventions whether infrastructure or policy and regulatory – that could lead to greater interlinkage between the two urban agglomerates in the medium term. In both cases, more details are available for short-term plans that are being implemented, while broad directions and thrust areas are available for a longer horizon of about 5 years for each city. Both cities are currently also initiating formulation of long-term visions and plans until 2030, an exercise that could benefit from coordination if the governments agree on the objective of promoting ABC as an economic corridor.

2. Profile of the Almaty–Bishkek Corridor

72. The ABC comprises Bishkek city and Chui oblast in the Kyrgyz Republic and, in Kazakhstan, the Almaty and Zhambyl oblasts and Almaty city.¹⁹ The Almaty and Zhambyl oblasts are relatively rural, with urban population representing about 23 and 39% of total population. Agriculture accounts for about 14 and 10% of the respective regional products of Almaty and Zhambyl, while services account for 66–70%. The per capita gross regional product (GRP) was around \$5,150 in PPP terms in Almaty oblast and \$2,600 in Zhambyl. **(Figs for 2011, need to be updated).**

73. The urban population share in Chui oblast was 17.8%, per capita income in PPP terms was \$2,400, with a significant rate of poverty at 28.6%. Agriculture is the largest sector in Chui oblast but its share in GRP has fallen over 2003-12 due to absence of growth. Agriculture includes crop production (cereals, vegetables and fruits – partially export-oriented, other crops) and meat and milk production (large part of it goes to Kazakhstan: officially, e.g. milk; or unofficially, e.g. meat and live sheep, horses, cows). Manufacturing, construction and transport and communication have grown strongly during the past decade, with industry and services now accounting for 25% and 37% of the GRP. Key sectors of manufacturing include food production, construction and metallurgy.²⁰ There is Free Economic Zone “Bishkek” (FEZ-Bishkek), which has three locations in Chui oblast near Bishkek. Operating since 1995, the FEZ-Bishkek has 80–100 enterprises with investments from more than 20 countries, and employment for 2500–3000 persons. In 2012, the FEZ net exports were negative.²¹

74. In brief, therefore, these oblasts characterizing the ABC have some agriculture, particularly in Chui, and only limited manufacturing dynamism. Low levels of economic activity coexist with low population densities also. Population density in Chui oblast is 40 people per square kilometer, while in the Almaty and Zhambyl oblasts in KAZ, the density is 9 and 7 persons per square kilometer respectively. By comparison, the population density in Almaty and Bishkek is close to 5,000 per square kilometer. The main economic potential of the ABC is clearly concentrated at its end-points, the cities of Almaty and Bishkek.

¹⁹ The corridor also serves flows of people (tourism) and goods (apples and some other fruits) between Kazakhstan and Issyk-Kul oblast (located east of Chui oblast).

²⁰ Kara-Balta town in Jaiyl rayon hosts a gold refinery, which processes concentrate produced at Kumtor gold mine. This explains large shares of metallurgy in industrial output and of manufacturing in GRP. This is also partially responsible for hikes and drops in the oblast GRP replicating gold production patterns.

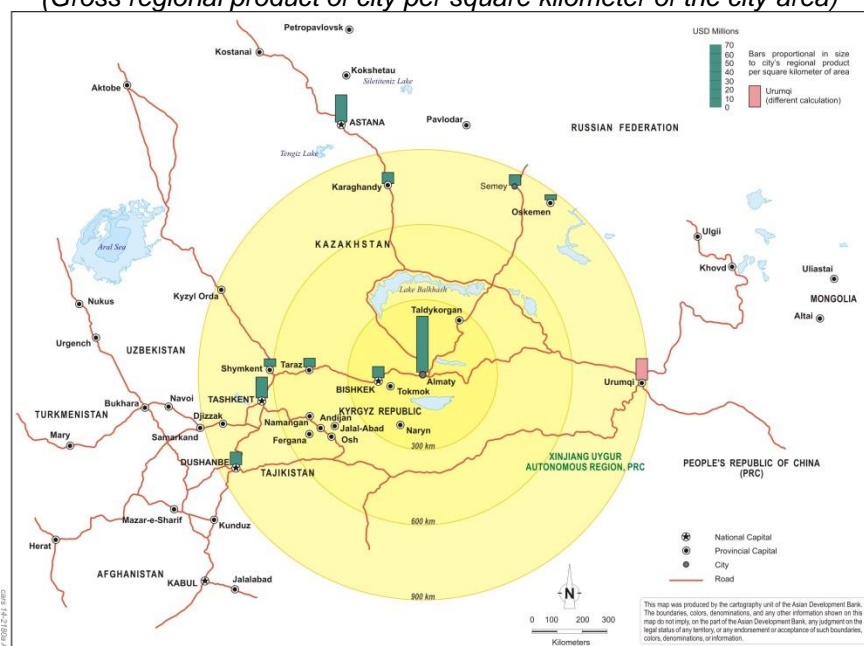
²¹ This is accounted in part by the large share of production for domestic market and by the fact that substantial exports are accounted for by re-exports of cars that are not manufactured or assembled locally. See web-site of FEZ-Bishkek www.fez.kg

Almaty

75. Cities are increasingly being recognized as the engines of growth in the 21st century. Just forty city-regions are responsible for over two-thirds of the total world economy and most of its innovation, and an estimated \$53 trillion will be invested in urban infrastructure in the coming two decades (Khanna, 2011). Distinguishing between 3 types of cities—global hubs, mega-cities and gateway cities—Almaty can be classified as a gateway city, a regional economic cluster that facilitates access to frontier markets.²²

76. The regional dimension of Almaty is evident in the map below that shows major cities in the Central Asian region in 3 concentric circles with Almaty at the center, at distances of 300, 600 and 900 kilometers. For each city, the height of the associated bar shows the economic density in terms of economic activity measured by GRP per square kilometer of the city area. At almost USD 63 million per square kilometer, the economic density of Almaty is more than twice as high as the two closest cities, Astana and Tashkent.²³

Figure 4.1: Economic density: select cities in Central Asia
(Gross regional product of city per square kilometer of the city area)



N.B. Data for Urumqi calculated using only some of the districts and is not comparable to the others in the map.

77. In terms of absolute size too, Almaty represents one of the largest economies in the region in a radius of 1,000 kms. Its GRP is twice as big as the next city, Astana, and greater by almost a factor of more than 15 relative to Bishkek. In terms of population too, Almaty is the

²² Khanna (2011) defines global hubs as global capitals such as New York, London, Hong Kong and Tokyo. Mega-cities are hugely populous urban centers: São Paulo, Lagos, Jakarta. Gateway cities open access to frontier markets, such as Cape Town, Dubai, and Almaty.

²³ Comparable data were unavailable for Samarkand in UZB. Data are from the statistical agencies of Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan, respectively; cities' official websites; and staff calculations. Calculations based on GRP (latest available data) at market exchange rates. For Kazakhstan, GRP for the city is calculated as share of city population of the administrative region, except for Almaty and Astana which are treated as separate regions in the statistics.

largest after Tashkent, while Bishkek is also amongst the most populated. Almaty's regional profile is also evident from its role as a distribution center for goods, and as a regional hub for international organizations and companies. It is also a destination for migrant labor from neighboring countries, both for seasonal and longer term work as well as an initial destination prior to departing to other destinations.

78. Not surprisingly, the city is the largest economy in the country. Almaty accounted for 19% of national GDP, with a GRP of about USD 42.6 billion in 2013. The city's GRP is comprised overwhelmingly of services, with major ones being wholesale and retail trade, information and communication, transport and warehousing, and real estate. Agriculture has no weight in the city's GRP while industry and processing industry accounted for only 9.6% of the city's product. The city's external trade turnover was almost USD 26 billion in 2013, of which nearly \$20 billion was imports.

Table 4.1: Population and Gross Regional Product: Select Cities in Central Asia

Country	City	Population ('000s)	Gross regional product (USD million)
KAZ	Almaty	1,508	42550
KAZ	Astana	814	21337
UZB	Tashkent	2,353	7958
TAJ	Dushanbe	776	1817
KGZ	Bishkek	891	2562
KAZ	Karagandy	485	6254
KAZ	Semey	338	3265
KAZ	Taraz/Shambyl	351	1834
KAZ	Shymkent	683	3370
KAZ	Oskemen	326	3151

Source: See footnote 20.

79. Tourism and financial services are important parts of Almaty's economy. Nearly one-third of all workers in financial sector in KAZ are employed in the city, which accounted for 44.1% of the total deposits and 39% of loans in the country in 2013. The National Bank of the Republic of Kazakhstan, regulators of financial activities, the stock exchange, 33 second-tier banks out of 39 active banks, and 31 insurance companies operate in the city.

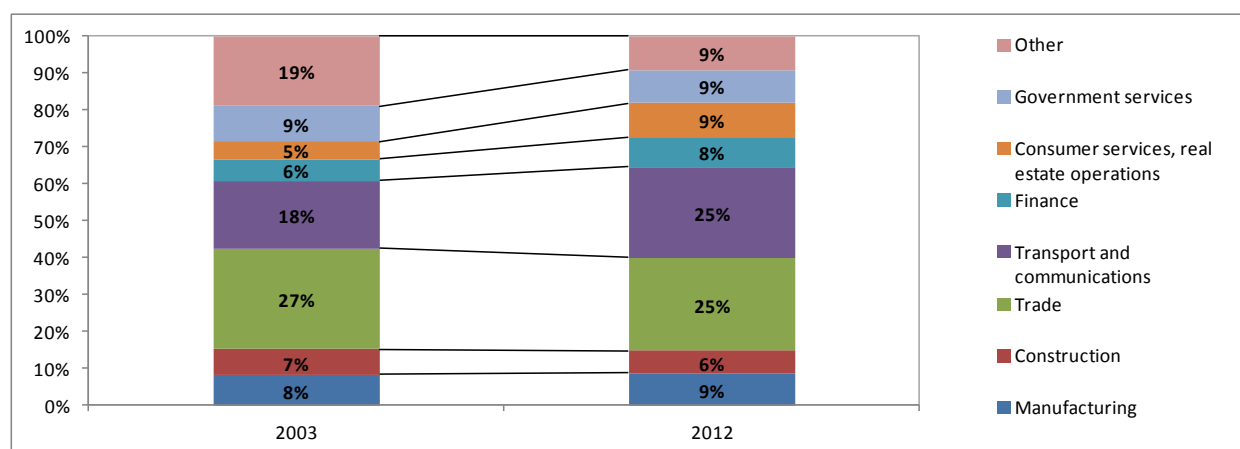
Bishkek

80. Spread over 170 square kilometers, Bishkek had a population of 895,000 people in 2012, growing at 1.5% per annum since 2005. Although much lower than Almaty, the per capital income in Bishkek is 2.5 times the national average, a gap that has been widening over time. Through much of 2006-12, Bishkek has accounted for more than a third of national GDP, accounting for 38.8% in 2012. The city's GRP was KGS 120 billion (about USD2.6 billion) in 2012, and has grown at 7.5% per annum since 2006.

81. Bishkek is primarily a services economy with manufacturing accounting for less than 10% of the GRP despite having grown its share marginally due to the rise of the garment industry during the past decade. Aside from the garment industry, the main industrial sectors of Bishkek are food production, which is partially export oriented, and production and distribution of electricity, gas and water, catering entirely to the domestic market. The share of manufacturing in total employment is higher than its share in the GRP implying lower labor productivity than in

the services sector. Within the dominant services sector, trade and transport and communication are important, followed by consumer services and financial services.

Figure 1. Bishkek's GRP structure by sector



82. Bishkek serves as consolidation and distribution center for Kyrgyz as a whole: its total imports in 2012 were USD3.2 billion and total exports were USD1.2 billion. Imports into Bishkek are consumed not only in the city but also in other parts of the country. This is also true for some exports, which are sold from Bishkek, but produced in other parts of Kyrgyz (gold, electricity).

83. Almaty and Bishkek, the endpoints of the ABC are thus both important economic centers. While Almaty is a regional gateway city, with a GRP and per capita incomes much higher than those in Bishkek, both cities are large parts of their national economies and with greater per capital incomes than national averages. In terms of population, Almaty and Bishkek are among the largest cities amongst the countries of the former Soviet Union in a radius of 1000 kilometers of Almaty. By standards of the region, the physical distance between the two cities is quite small. Both cities are also primarily dominated by services sector, with relatively low role for manufacturing and for agriculture. Wholesale and retail trade is important for both cities, and both aspire to be important centers for regional distribution of goods. Both cities also seek prominent regional role in financial services, and as regional hubs for international organizations and companies.

84. In sum, the ABC is characterized by low levels of economic activity, primarily services and some agriculture, between the two endpoints of Almaty and Bishkek, while the endpoints are large regional centers, though Almaty is much larger than Bishkek. Both cities are structurally similar: low share for manufacturing, primarily driven by service sectors. Within services, there are several areas of overlap, such as wholesale and retail trading, transport and communication, financial services and tourism. Within these broad areas, however, there may be differentiation at sub-sector levels between the two cities. Given their size, physical proximity and differences in endowments, there are potential gains from increased integration between the two economies. At the same time the cities also need to compete with one another in their common areas of focus. The extent to which strategic cooperation and competition can benefit both economies would be an important determinant of any success of the ABC as an economic corridor.

3. Economic Links between Almaty and Bishkek

85. An assessment of costs or barriers to trade between Almaty and Bishkek provides indirect evidence on the extent to which the cities are integrated. These barriers to trade are analyzed here using an approach that looks not at trade flows (like gravity models) but instead uses price dispersion and price gaps to infer trade costs. This may be particularly relevant to the present context given the presence of large informal flows of goods in the region through the ubiquitous shuttle traders. A large part of the trade flows in the region is not captured in official statistics due to its informal nature, being undertaken in through regional *bazaars* (Graminski and Mitra, 2012). This section looks at the behavior of prices in Almaty and Bishkek as well as some of the other cities and oblasts in the vicinity to assess the nature of trade costs, or conversely the nature of integration, between the economies of Almaty and Bishkek.

86. The core idea here is that if there is free arbitrage, which is assumed in most trade models anyway, then the price for any identical good k at any two points i and j in space must reflect a no-arbitrage condition such as:

$$|p_i^k - p_j^k| \leq \pi_{ij}^k$$

where p denotes the prices and π is some parameter. But while the intuition is simple, implementing it empirically is subject to some caveats. For example, it is important to ensure that the good k being sold at place i is identical to the good being sold in j . This may be violated if the good comes bundled with services (e.g. air conditioned supermarket, friendly customer service etc.) in one place and not at the other. Relatedly, there is the possibility that price of the good in both places may incorporate non-tradable elements, such as services. If there is imperfect competition and producers are pricing to the market, the same good produced by a single producer may be sold at different prices.

87. Nonetheless, the behavior of prices can convey substantial information about trade costs and integration of markets while keeping in mind the caveats mentioned above. Grafe et. al (2005) used this approach to look at the nature of integration within Kazakhstan, Kyrgyz Republic and Uzbekistan during 1999 to 2003 and found that dispersion of relative prices of consumer goods showed the markets were integrated. They further found that national borders did not add much to variation in relative prices across different regions in Central Asia, particularly compared to within-country borders. The within-country trade costs were significant in their analysis and went beyond transport costs. Grafe et. al. (2005) concluded the shuttle trade was leading to equalization of prices but internal barriers to trade such as numerous road blocks and attempts by local governments to restrict access to local markets and bazaars were leading to price differences across regions that appeared as high as differences across countries.

88. In the analysis below we look at the behavior of prices in Almaty and Bishkek, and complement that with a comparison with behavior of prices in two other cities, Taraz and Shymkent (data for these two cities are available only at oblast levels, namely, Jambyl and Southern Kazakhstan respectively). Since both the latter cities are located within Kazakhstan, a comparison of their price links provides a benchmark that excludes exchange rate and border effects. To the extent there is possibility of internal barriers to trade, as noted by Grafe et. al. (2005), the difference in distance between Almaty and Taraz versus Shymkent provides an indication of trade costs due to internal factors. Bishkek is located between Almaty and Taraz and, based on anecdotal evidence, has strong links with both cities in Kazakhstan.

89. Due to the shared history of both countries, the basket of goods in the CPI is quite comparable for Kazakhstan and Kyrgyz Republic, but in view of limited time we considered 41 specific commodities for which required data could be found. The data used are disaggregated, commodity-specific prices on monthly basis at the oblast level (both Almaty and Bishkek are classified as oblasts for the price data). Some of the commodities were excluded that were deemed non-tradeable. A few others that were excisable and subject to government regulations were also excluded, leaving a total of 19 goods, of which 8 are consumer durables. Table A4.1 shows the full list of commodities as well as the classification of the commodities in terms of tradable, non-tradable and subject to government regulation. The time period selected for the analysis is Jan 2010 to Jan 2014, which starts subsequent to the banking crisis in Kazakshtan in 2008 and ends prior to the large devaluation of the Tenge in April 2014.

90. Since the price data are in terms of indices, while exchange rates used are in levels, the methodology used is to take the first difference of the exchange-rate adjusted equality of prices, i.e.,

$$p_{it}^k = e_t p_{jt}^k$$

where the p 's represent prices as before and e the nominal exchange rate, all measured at time t .²⁴ Log differentiation of this gives the form used in the analysis:

$$d\ln(p_{it}^k) = d\ln e_t + d\ln(p_{jt}^k) \quad \text{-----} \quad (1)$$

91. We thus look at the correlation between the two sides of equation (1), i.e. correlation between percentage change in monthly prices in Bishkek relative to the percentage change in prices in Almaty and percentage change in the exchange rate of the Som to the Tenge. For comparisons across cities within Kazakhstan the change in exchange rate is set equal to zero.

92. Table 4.2 shows the variation in the prices of the selected commodities in Bishkek and in Almaty. Two things are worth noting here. First, price volatility is much larger in Bishkek than in Almaty with the ratio of variability ranging from a factor of 2 to almost 12 times for most of the commodities. The substantially higher price volatility in Bishkek could be due to several factors. At the aggregate level, the Kyrgyz Som has been lot more volatile than the Kazakh Tenge (at least prior to the devaluation earlier this year).²⁵ Being a regional distribution center linked to other markets in the region may also lead to lower variability of prices in Almaty relative to that in Bishkek. Finally, the Almaty markets is in some sense more formal, so "menu costs" of changing prices may be higher than in Bishkek, where more retail transactions are done in bazaars and changing prices is easier.

²⁴ This is the standard law of one price. In terms of the equation used above, the parameter π_{ij}^k is arbitrarily set to zero. The correlations of the first differences will not be affected by the fixed value of π .

²⁵ During the period under consideration here, the Tenge has been fixed at around 150 KZT/USD. The Kyrgyz Som appears implicitly ties to the Russian ruble and in 2010–2014 it floated to USD in a broad range together with ruble. This may affect consumer prices as a large part of consumer goods are imported from China and some other countries, whose own exchange rates with the dollar have been relatively stable.

Table 4.2: Price variability in Bishkek and Almaty January 2010—December 2013
(coefficient of variation, monthly prices)

Commodity description	Bishkek	Commodity description	Almaty
Fruits and vegetables	7.4	Fruits and vegetables	4.0
Materials for repair of housing	4.0	Sugar and sweets	1.6
Audiovisual equipment and cameras	3.5	Meat	1.2
Small tools	3.4	Oils and fats	1.1
Dairy products, cheese and eggs	3.3	Bread and cereals	1.0
Sugar and sweets	3.1	Fish	0.9
Tableware	3.1	Dairy products, cheese and eggs	0.7
Other goods and equipment for rest	3.0	Alcohol-free beverages	0.7
Bread and cereals	2.8	Other foods	0.7
Footwear, including repair	2.5	Materials for repair of housing	0.6
Oils and fats	2.1	Consumables	0.4
Other foods	2.1	Curtains and other home textiles	0.3
Medicines and medical devices	2.0	Furniture and carpeting	0.3
Consumer devices	1.8	Audiovisual equipment and cameras	0.3
Alcohol-free beverages	1.7	Small tools	0.3
Meat	1.6	Tableware	0.3
Fish	1.6	Consumer devices	0.3
Consumables	1.6	Other goods and equipment for rest	0.2
Curtains and other home textiles	1.4	Apparel	0.2
Apparel	1.3	Medicines and medical devices	0.2
Furniture and carpeting	1.1	Footwear, including repair	0.2

Source: Asian Development Bank

93. Second, there is considerable diversity in the patterns across goods of price volatility: generally food-related items tend to be more volatile than the other goods in Almaty, while this is true to a much weaker extent in Bishkek. The correlation of relative ranking of commodities in terms of their price volatility is statistically insignificant across all four cities at up to 5% level of significance. The absence of consistent patterns in price volatility across the goods suggests links in price movements may not be strong across the cities, reflecting costs or barriers to trade both internal and across border.

94. The results of correlation in changes in prices based on equation (1) above, done for 4 locations – Almaty, Bishkek, Taraz and Shymkent – are shown in Table 4.3 below. Columns 2–4 provide correlations between change in prices between Almaty and, respectively, Bishkek, Taraz and Shymkent for the commodity listed in column 1. Similarly, columns 5 and 6 provide the same correlation between Bishkek and, respectively, Taraz and Shymkent. The strongest links are evident between Almaty and Taraz (column 3) with statistically significant correlations for 12 of the 19 commodities. There is also some evidence of correlation in prices between Almaty and Bishkek but much less so than in case of Almaty and Taraz, with significant correlation for only 6 of the commodities, and with correlation values generally smaller than those between Almaty and Taraz. 4 of the 6 significant correlations between Almaty and Bishkek prices are for food items – fish, fruits and vegetables, sugar and sweets, and other foods. As seen from columns 4, 5 and 6, there is little evidence of correlations between prices

for Almaty with respect to Shymkent if we exclude the anomalous negative correlations,²⁶ and between prices for Bishkek with respect to either Taraz or Shymkent.

Table 4.3: Correlation in prices across Almaty, Bishkek, Taraz and Shymkent
(percentage change in monthly prices adjusted for exchange rate)

Commodity	Almaty			Bishkek	
	Bishkek	Jambyl (Taraz)	S. Kazakhstan (Shymkent)	Jambyl (Taraz)	S. Kazakhstan (Shymkent)
1	2	3	4	5	6
Bread and cereals	0.15	0.38*	-0.35**	-0.19	0.01
Meat	0.1	0.49*	-0.56*	0.05	0.13
Fish	0.39*	0.58*	-0.34**	0.15	-0.1
Dairy products, cheese and eggs	0.26	0.04	0.02	-0.14	0.13
Oils and fats	0.03	0.014	-0.08	-0.33**	0.07
Fruits and vegetables	0.36**	0.35**	-0.13	0.09	-0.01
Sugar and sweets	0.31**	-0.12	0.06	0.14	0.03
Other foods	0.41*	0.30**	-0.17	0.47*	-0.43*
Alcohol free beverages	0.09	-0.13	-0.19	0.27	0.26
Apparel	-0.06	0.18	0.14	0.38*	0.29**
Footwear including repair	0.22	0.93*	0.12	0.21	-0.01
Materials for repair of housing	0.04	0.004	0.99*	0.08	0.01
Furniture and carpeting	-0.2	0.34**	0.38*	0.19	0.17
Curtains and other home textiles	0.30**	0.64*	-0.08	0.04	0.16
Consumer devices	0.17	0.46*	0.30**	0.14	0.05
Tableware	-0.22	0.11	0.1	0.1	-0.43*
Consumables	0.06	0.92*	0.14	0.23	-0.06
Medicines and medical devices	0.32**	0.89*	0.94*	0.31**	0.39**
Audiovisual equipment and cameras	0.02	0.42*	0.21	0.14	0.08

Source: ADB

*: Correlation significant at the 0.01 level (1-tailed).

**: Correlation significant at the 0.05 level (1-tailed).

95. Notwithstanding the active shuttle trade, prices for apparel are not correlated between Almaty and Bishkek, though there is significant correlation of Bishkek with Taraz and Shymkent. The absence of correlation for meat is also inconsistent with anecdotal evidence of movements of meat and livestock between KGZ and KAZ. It is also worth noting that the observed correlations or lack thereof may also be affected by the higher barriers and stronger enforcement at the borders of KAZ since 2011, after its accession into the CU was implemented.

96. These results are broadly consistent with both border effects and distance effects in terms of barriers to trade. The stronger link between Almaty and Taraz relative to Almaty and Bishkek shows border matters in creating trading costs that lower the integration between the markets in Almaty and Bishkek. Conversely, the weak link between Almaty and Shymkent prices relative to that between Almaty and Taraz suggests distance and associated internal

²⁶ Shymkent is about 80 kilometers from Tashkent, another major regional city, with considerable trade in food products between the two. The observed negative correlations with prices in Almaty may reflect Shymkent's links to Tashkent.

barriers may be lowering integration between markets in Almaty and Shymkent, consistent with the findings of Grafe et. al. (2005).

97. It should be noted that the correlations above are for *contemporaneous* prices and do not take into account lags in movement of prices. If prices are at all sticky for any reason, it is possible that the markets may still be linked though with the effects manifesting with some lag. To incorporate lags in impact of change in prices in one location on the same in the other location, Granger causality specifications were estimated, using up to 3 lags of prices of the commodity in both locations.²⁷ Finding Granger causality (GC), either one-way or two-way, may be interpreted not as “causing” the other variable but as providing incremental predictive content. For example, if the change in prices for a commodity in Bishkek GC the price change in Almaty, it would indicate the prices in Bishkek provide predictive content for those in Almaty and in that sense the markets in the 2 cities are linked to one another. Table 4.4 provides summary tabulations for the tests of GC for change in prices across the 4 cities. Since the link between Almaty and Bishkek in terms of contemporaneous correlations was strongest for food products, and since the interest here is primarily on these two cities, GC tests were confined to food products only.

98. The results do not significantly modify the picture emerging from analyzing contemporaneous price movements. There is some evidence of lagged links between Almaty and Bishkek prices, but for the same commodities as before. In comparison to contemporaneous price correlations, more commodities show GC-links between prices in Almaty and Shymkent and between Bishkek and Taraz.

Table 4.4: Tests of Granger causality between change in prices across Almaty, Bishkek, Taraz and Shymkent

Commodity	Almaty			Bishkek	
	Bishkek	Jambyl (Taraz)	S. Kazakhstan (Shymkent)	Jambyl (Taraz)	S. Kazakhstan (Shymkent)
1	2	3	4	5	6
Bread and cereals			Y	Y	
Meat					
Fish		Y	Y		
Dairy products, cheese and eggs	Y	Y	Y	Y	
Oils and fats	Y	Y		Y	
Fruits and vegetables	Y			Y	
Sugar and sweets		Y	Y		
Other foods	Y	Y	Y	Y	
Alcohol free beverages				Y	

Source: ADB

N.B.: Y indicates presence of 1-way or 2-way GC at 10% significance level.

99. To summarize the results of analysis of prices, Bishkek shows much higher price volatility than do the 3 cities in Kazakhstan, and there is no consistent pattern in the relative volatility of prices across commodities. There is some evidence of correlation in price changes between Almaty and Bishkek, but it is less so than between Almaty and Taraz, suggesting

²⁷ Specifically, the change in price (e.g. in Almaty) is regressed at the same time on three lags of its own value and on 3 lags of exchange-rate adjusted price changes in Bishkek. Similar specifications are done for all the other pairs.

border effects are still important between the two countries. This would imply that elimination of the border effects following the participation of the Kyrgyz Republic into the CU will have a significant impact in further integrating Almaty and Bishkek, which would in turn boost the potential for developing the ABC. Using Granger causality estimates to incorporate lagged links in price co-movements across these markets provides results that are also broadly consistent with the existence of relatively weak links between Almaty and Bishkek, suggesting the links may be attenuated by border effects and possibly other factors that increase barriers to trade between the 2 cities. A qualitative assessment of these factors is undertaken in the next section based on primary survey data collected for the study.

4. Qualitative aspects of trading between Almaty and Bishkek

100. A small survey of 60 firms (the Almaty–Bishkek Corridor Survey (ABCS)) was undertaken in Bishkek during July–August 2014 to explore qualitative aspects of economic links between firms in Bishkek and Almaty as well as 2 other cities in Kazakhstan, Taraz and Shymkent. Only one out of ten Kyrgyz firms is engaged in direct exports.²⁸ Though Russia and Kazakhstan are major trading partners, the proportion of firms dealing with businesses in Kazakhstan/Almaty would be even lower than 10%. The firms were thus selected in consultation with business associations to identify those with greater likelihood of interacting with firms in Kazakhstan. Due to its small size and methodology, the sample is thus indicative and not representative (of all firms in Bishkek). The survey findings are useful as a case study providing information on firms in Bishkek regarding their links with businesses in Almaty and the other cities in Kazakhstan.

101. The survey was conducted using interviews based on a questionnaire which included sections on general firm characteristics; owner/manager attributes; perceptions towards competition and the CU; and views towards transacting with firms in Kazakhstan. The questionnaire is provided in Appendix 2. Selected survey results are summarized here while more detailed tables will be made available later on the CAREC website.²⁹

102. The sample included 6 firms in the primary sector (dairy/meats, livestock, and crop production including fruits and vegetables), 41 in manufacturing (other food processing, light industry, wood/furniture, metal working and machinery, and other manufacturing), and 12 in services including trading. 9 of the firms are relatively new, less than 5 years old, 15 are between 5 to 10 years and 36 firms are older than 10 years in age.

103. Tables 4.5 and 4.6 show the mean sales by the firms, in terms of the type of customer and the geographic destination. Nearly half of the sales are to retail or wholesale traders, though a bit less in case of primary-sector firms who have a larger share of their sales to other producers. Direct sales to consumers account for about a quarter of the sales. The mean sales to domestic consumers are 50% of the total (more for services firms), with the rest accounted for mainly by Kazakhstan and Russia. The larger share of sales to Kazakhstan by these firms reflects sample selection and possibly role of transit sales meant for Russia.

²⁸ See the 2013 Business Environment and Enterprise Performance Survey **B** (BEEPS) of the European Bank for Reconstruction and Development (EBRD) and the World Bank. The survey found share of sales from exports for those who are engaged in direct export declined to 51% from 63% in 2008, and that the percentage of direct export sales in total sales also declined, from 6.4% in 2008 to 5.6% in 2013. (<http://www.worldbank.org/content/dam/Worldbank/document/eca/central-asia/BEEPS-At-A-Glance-2013-Kyrgyz-Republic-en.pdf>).

²⁹ <http://www.carecprogram.org/>. Data will be uploaded by November 2014.

Table 4.5: Sales by type of customer and sector
(% of total sales)

	Direct consumers	Industrial buyers	Retailers	Wholesalers
Firm category	Mean	Mean	Mean	Mean
Primary	0.27	0.31	0.08	0.34
Manufacturing	0.25	0.18	0.09	0.49
Services	0.32	0.09	0.28	0.31
Total	0.26	0.17	0.12	0.44

Table 4.6: Sales by destination and sector
(% of total sales)

	Domestic	Russia	Kazakhstan	Rest of World
Sector	Mean	Mean	Mean	Mean
Primary	0.41	0.19	0.30	0.10
Manufacturing	0.49	0.18	0.28	0.05
Services	0.63	0.02	0.26	0.08
Total	0.51	0.15	0.28	0.06

Source: ABC Survey (2014)

104. In contrast to sales, the inputs purchased by the firms show little role of Kazakhstan in Table 4.7. The share of inputs originating from outside is led by PRC followed by Russia, while other countries collectively also account for nearly one-fifth of the purchases. While the questionnaire sought responses about the source of production of inputs, the high share of domestic inputs indicates many firms may have not known the source and only indicated their immediate point of purchase of the inputs.

Table 4.7: Inputs used by source of production and sector
(% of total purchases)

	Domestic	PRC	Russia	ROW
Sector	Mean	Mean	Mean	Mean
Primary	1.00	0.00	0.00	0.00
Manufacturing	0.48	0.20	0.11	0.21
Services	0.64	0.19	0.03	0.15
Total	0.57	0.17	0.08	0.18

Source: ABC Survey (2014)

105. Together these tables show firms in the sample as active in transacting with businesses outside of the Kyrgyz Republic, dealing with suppliers in PRC and Russia as well as other countries for their inputs, while selling almost half their output to businesses in Kazakhstan and Russia. Since only one quarter of their sales are to direct consumers, the remaining three quarters are to firms, either producers, or retail or wholesale traders.

106. The survey elicited responses from these firms on the extent of competition they faced and, in view of the impending Kyrgyz accession to the CU, the geographic source of their perceived competition looking ahead. The results are presented in tables 4.8 and 4.9 respectively. A third of the firms indicated that competition from imports or firms outside the country was not a problem in their perception, while almost two-thirds believed competition from outside was important to their operations. Table 4.9 shows the major sources of perceived competition from outside are Russia and PRC and to some extent, Moldova. Competition from Kazakhstan was also mentioned by some, but less so.

Table 4.8: Competition from outside the Kyrgyz Republic

Nature of business	Importance of competition from imports/outside firms				Total
	Very important	Important	Not important	No impact	
primary	0	6	0	0	6
manufacturing	9	19	12	1	41
services	2	1	8	1	12
Total (out of 60)	11	26	20	2	59

Source: ABC Survey (2014)

Table 4.9: Geographic source of perceived external competition

Nature of business	Major source of competition								Total
	kaz	prc	russia	uzb	TUR	moldova	belarus	germany	
primary	1	0	1	0	1	2	0	0	5
manufacturing	4	10	10	1	1	4	2	1	33
services	0	0	1	0	0	2	0	0	3
Total (out of 60)	5	10	12	1	2	8	2	1	41

Source: ABC Survey (2014)

107. More than two-thirds of the firms (43) in the sample have transactions with businesses in Kazakhstan. Amongst firms that were not transacting with firms in Kazakhstan, the major reasons indicated for not doing so were “bureaucratic barriers” and “not enough trust”. Bureaucratic barriers can be addressed through appropriate measures to simplify procedures. Lack of trust on part of respondents reflected not just insufficient information about the other party to the transaction but also concerns on part of respondents whether they could deliver larger orders from Almaty with adequate quality and on time. As shown in Table 4.10, lack of information may not be a major problem with more than three-quarters of the sample indicating they regularly interacted with business persons from Kazakhstan. The strong links between Almaty and Bishkek are again underlined by the fact these interactions are mostly with businesses in Almaty with only a few indicating the same for the other major Kazakhstan cities in the vicinity: Taraz and Shymkent.

108. Table 4.11 shows regular interactions with businesses in Kazakhstan (Almaty) are not replicated with other countries. About one-fourth of the firms indicated regular interactions with

businesses in PRC, with the incidence even less for businesses in Russia and in other countries.

Table 4.10: Interactions with businesses in Kazakhstan
(Number of firms answering “Yes”)

Nature of business	Do you interact regularly with business persons from:		
	Almaty	Taraz	Shymkent
primary	5	0	0
manufacturing	33	3	4
services	7	0	0
Total (out of 60)	45	3	4

Source: ABC Survey (2014)

Table 4.11: Interactions with businesses in other countries
(Number of firms answering “Yes”)

Nature of business	Do you interact regularly with business persons from:		
	PRC	RUS	Others
primary	0	1	1
manufacturing	4	15	10
services	0	1	0
Total (out of 60)	4	17	11

Source: ABC Survey (2014)

109. The special relationship between Almaty and Bishkek is further evidenced in the frequency of travel by interviewed business persons to Almaty in the previous 6 months (Table 4.12). Almost half of the respondents had traveled to Almaty at least once in that period. As before, the links with the other two cities, Taraz and Shymkent, are relatively less.

Table 4.12: Travel to cities in Kazakhstan

Number of trips	Trips in past 6 months to:		
	Almaty	Taraz	Shymkent
0	29	57	56
1-5	26	1	2
6-10	2	0	0
More than 10	3	1	1
Total	60	60	60

Source: ABC Survey (2014)

110. The survey data thus broadly reaffirm the close links between firms in Bishkek and in Kazakhstan, specifically Almaty. These reflect several factors, including relative physical proximity, language and cultural ties, and the regional profile of Almaty as a gateway city. At the same time, the survey covers only a small selection of firms that were chosen for the likelihood of having ties with firms outside the Kyrgyz Republic. As noted earlier, less than 10% of all businesses in Kyrgyz have sales outside the country, implying the vast majority of firms in Bishkek do not have transactions with businesses outside the country, including Almaty. Several firms interviewed in the course of the survey indicated they were uninterested in foreign markets due to local operations being sufficient for their objectives. Others felt unprepared for catering to larger orders in terms of their ability to deliver on time and with quality. Identifying policy interventions that can help the firms improve their capacities would further strengthen their ability to benefit from exploiting opportunities outside Bishkek, such as the large market of Almaty. Regulatory barriers, also cited by some firms as a concern for trading with outside markets, are another potential intervention area for strengthening economic links between Bishkek and Almaty.³⁰

5. Development Plans of Almaty and Bishkek

111. Economic development of Almaty and Bishkek, the two endpoints of ABC, is an obvious determination of the potential for ABC as an economic corridor. This section reviews available information on existing development plans of the two cities³¹

Almaty

112. Under its Strategy 2050, KAZ is targeting an increase in non-oil exports from 32% to 70%, increase per capita income and labor productivity each by a factor of five, and increase the share of small-and medium enterprises (SMEs) in its GDP from 20% to 50%. These targets will be driven by a policy of spatial agglomeration of people, knowledge and capital around “long-term growth poles”. In the process, the share of urban population will increase from 55 to 70% by 2050, with 35% of the population concentrated in cities with population exceeding 2 million. Through urban agglomeration, three megacities (with population exceeding 1 million) are initially proposed to be developed: Almaty, with a target population of 3.5 million people, Astana and Shymkent, each with a target population of 2 million. The broad strategy relies on higher urban growth through increased density of population and economic activities and a focus on development of services sectors.

113. Inter-regional development plans until 2020 have been approved for each agglomeration, including Almaty. Additionally, memorandum of understanding has been signed between Almaty city and the Almaty oblast on development of agglomeration and guidelines formulated for determining agglomeration boundaries. 2015 will mark implementation of a new Almaty development program with its Master Plan tailored to the Interregional Development Plan of Almaty Agglomeration until 2020 approved by the Government in June 2014. The new Master Plan was unavailable at the time of this study but will incorporate developments along

³⁰ According to the BEEPS, business climate in Kyrgyz Republic has improved across broad indicators since 2008. Although firms did not rank trade regulations as a serious problem, the least improved areas (since 2008) in absolute terms included “Customs and trade regulations”.

³¹ The material on development plans for Almaty and Bishkek relies on information provided by respective city administrations. For Almaty, see also information presented by Ministry of Regional Development, KAZ to the CAREC Senior Officials, available at http://www.carecprogram.org/uploads/events/2014/SOM-June/Presentation-Materials/002_101_209_Session-2.pdf.

three radial axes: towards the district center Uzunagash (in the direction of Bishkek), Kapshagay town and district center Shelek (in the direction of Khorgos).

114. It is envisaged the areas of influence of Almaty agglomeration will include the Almaty city and settlements in suburban areas covering five administrative districts of Almaty oblast: Karasay, Talgar, Ili, Yenbekshikazakh, Jambyl and Kapshagay city. Coordinated infrastructure development of Almaty and its agglomeration is planned that would ensure implementation of unified urban planning for providing infrastructure development and for coordinating interregional interests in the development of Almaty and areas of its influence. This includes a key focus of agglomeration strategy, namely, formation of high quality and integrated transport, information and communication system of the “city-agglomeration”, as well as modernization and construction of new communal infrastructure.

115. The development plans for Almaty underline the role of the city as a logistics hub with high-speed transport infrastructure supporting the agglomeration. One of the major infrastructure facilities deemed strategic for development of the Master Plan of Almaty and its agglomeration is construction of the Almaty Ring Road highway on a concession basis scheduled for 2014. The Ring Road will be a 65.5 km toll road 19 kilometers from the center of Almaty city. Its “zero picket” would be located west of Almaty city on 23rd kilometer of the highway Almaty–Uzynagash near the Kyrgauldy village, and it would end on the eastern side of Almaty on the 22nd kilometer of the highway Almaty–Talgar–Evgenievka. The Ring Road is proposed as the external boundary of the suburbanized belt of Almaty city, and will accommodate existing and new industrial and transport-logistics centers. It will increase the transit capacity and competitiveness of the trans-Kazakhstan transit routes by creating a bypass around Almaty city, connecting to both the Khorgos–Almaty–Bishkek–Taraz–Shymkent (Western China–Western Europe) route and the Almaty–Karaganda–Astana–Petropavlsk route. Additional transport initiatives include railway construction to bypass city center, creation of a cargo airport northwest of Kapshagay, and development of a regional network of light aviation.

116. Four satellite towns are also planned as part of the development of Almaty agglomeration. These mini-cities will be located along the national highway Almaty–Kapshagay with each having a specialized function so they could complement each other and lead to evolving the expanded Almaty agglomeration into a polycentric city. A special economic zone is also planned to complement the satellite towns.

Bishkek

117. In 2014, city authorities adopted two documents, which are to set development agenda for Bishkek. First, City Council of Bishkek approved *Strategic Priorities of the Social and Economic Development of Bishkek City “Town and Townspeople” for 2014–2018*. Then, based on these priorities, Mayor’s office of Bishkek adopted *Bishkek City Social and Economic Development Program for 2014–2018 “City of Open Potential.”*³²

118. The Program has three key pillars: “Safe city,” “Comfortable city,” and “Successful city.” It also has few cross-cutting themes including (i) citizen participation, (ii) public–private

³² These documents are based on national strategies and previous city development documents including National Sustainable Development Strategy of the Kyrgyz Republic for 2013–2017 and accompanying Government’s program; Local self-government development programme of the Kyrgyz Republic for 2013–2017; and Bishkek city development concept until 2025.

partnership, outsourcing of municipal services, and (iii) infrastructure development. The “Safe city” pillar provides a few concrete measures, which are under direct control of the city authorities (public order function is responsibility of the central government). These measures include: (i) citizen participation, e.g. through volunteer auxiliary police; (ii) better street lighting; and (iii) installing video surveillance systems in public areas. The “Comfortable city” pillar covers issues in development of municipal infrastructure, services and social development. Key activities include: infrastructure maintenance and development; improvements in user fee collection; responsibility of providers for quality of services; regulation of service tariffs; training of personnel; making order in general city planning scheme – a challenging agenda item as it requires fighting vested interests and corruption related to allocation of municipal land and access to utilities. The “Successful city” pillar provides more principles of economic development of the city rather than activity details. These principles include economic diversification; partnership of local government, business and citizens; and transparency of all activities.

119. The Program suggests city governance reforms such as increasing control of city authorities over city services funded and managed by the Government of the country (e.g. police, heating); increased efficiency in public spending; internal reform of city administration and strengthening of policy planning.

120. The Program refers to new budget policy, which refers to delimitation of expenditure responsibilities between central and city authorities; higher budget independence of the city; independent tax administration for local taxes; expenditure optimization and elimination of redundant functions funded from the city budget; improved management of municipal property; and, transparency of the budget.

121. Total costs of the Program is estimated at KGS 20.6 billion (about US\$0.4 billion), of which city budget would provide 23%, republican (national) budget – 27%, and the rest from other sources, with a funding gap of about 25%. The Program does not provide any details of the planned investments. However, “Investor’s Handbook” published by the City Development Agency (CDA) of Bishkek contains description of 13 projects. The level of details available for these projects varies though most projects are just ideas and, for some projects, the need for public intervention is not obvious.

122. The development plans of both Almaty and Bishkek are at one level primarily inward looking, as would be expected of any major city. Yet both have an implicit vision that is outward looking, evident in the case of Almaty, for example, by the emphasis on investments that enhance its regional connectivity, and focus on logistics services to support industrial parks and other economic zones envisaged around the increased connectivity. In the case of Bishkek, where the plans are less concrete in terms of investment projects, the intention is clearly on improving the business environment through better governance and more transparency to attract foreign investments to raise Bishkek’s regional profile. There is virtually no explicit recognition in either case of the spillovers, both positive and negative, that could be exploited (or avoided) from the other city’s growth trajectory and strategy. Given the economic proximity of the two cities and their large albeit unequal size, filling this gap can be of benefit to both. This is a role that is well suited to the CAREC program and can be pursued with the ABC as an important instrument in this context.

123. Both Almaty and Bishkek are initiating formulation of long-term development plans, so this is an opportune time to explore how strategic complementarities of their respective growth efforts can be built upon. This will require close collaboration at working level as well as at

leadership levels (city and national) to exchange information, discuss strategies and look for synergy in respective priorities. Bringing in the private sector from both sides would also be important in increasing the effectiveness of this collaboration.

124. The needed collaboration and working together towards this end would not be an event but a process. It would likely need some time to evolve, draw lessons and refine itself as the long term plans are formulated and implemented. The process will require a mechanism for the administrations of both Almaty and Bishkek to meet as frequently as needed, undertake joint analytical studies and strategic analyses as required, and share experiences and lessons. The CAREC program and its ABC initiative provides a potential umbrella for such a program of regional cooperation, that can be initiated with a mechanism led by the Mayors of each city, Almaty and Bishkek, and working-level interaction in a form acceptable to both cities. Based on experience and suitability, the initiative could be extended to other cities in proximity, such as Taraz and Shymkent. This can also provide a pilot template for similar initiatives in other parts of CAREC where the relevant member countries see potential for developing economic corridors, either domestically or cross border.

V. Conclusions

125. This study is a follow up to the long term strategic framework of the CAREC Program, the CAREC 2020, which introduced Economic Corridors as a key operational priority for the Program. Since its inception, the CAREC Program has focused on identifying and developing regional corridors, which now number six in all, with several sub-corridors, extending thousands of kilometers through and across the boundaries of CAREC member countries, covering a wide diversity of geographic terrains, in terms of both physical and economic geography.

126. To operationalize the CAREC 2020's emphasis on economic corridors, the study has attempted to provide a framework for corridor development in CAREC along three tracks – transport corridors (T1), transit corridors (T2) and economic corridors (T3). Each of these is of critical importance in the context of Central Asia, which has a large number of landlocked economies, several of whom are still adjusting to changed circumstances since their independence in 1991. One aspect of this adjustment has been attempts by these countries to develop their domestic road transport networks (T1) to be autonomous from the need to rely on neighboring countries, an aspect of their pre-independence transport systems. More broadly, given the dominance of rail networks in the Soviet Union, most CAREC member countries have inherited relatively less developed road networks that also deteriorated considerably after independence. Development of domestic transport corridors (T1) is thus an important priority for CAREC countries, a priority the CAREC Program has recognized and addressed through channeling almost 80% of the more than USD 23 billion in physical investments since inception into T1 corridor development. In most countries, this has also been supplemented by national programs where transport projects have complemented regional highways with the secondary and other roads to develop a transport network connecting communities across far flung but sparsely populated geographic areas.

127. The landlocked geography of the region underlines the critical importance of transit corridors, the second track (T2) of CAREC corridors development. T2 has also been well recognized by the CAREC Program and included under the TTFS 2020.

128. The third track (T3), Economic Corridor Development, is new to the CAREC Program. This is a more complex agenda than T1 and T2 but important over the longer term in ensuring a useful role for CAREC in contributing to the key challenges facing member countries, namely, economic diversification, job creation and growth. ECD focuses on using connectivity and other infrastructure to channelize and organize economic activity towards desired objectives, and this inevitably entails a strong role for private sector investment to complement public investment and policy initiatives. In the CAREC context, this is also linked in several countries to issues of spatial transformation, urban development, agglomeration and diversification of economic activities.

129. The study highlighted some critical prerequisites for successful T3 development: (i) the need to identify economic potential, without which private investment would not be forthcoming. This implies also a need for geographical selectivity and prioritization both across the CAREC corridors and within a given corridor; (ii) political commitment at 3 levels – first, towards enabling private sector development with associated needs for good governance, transparency and effective partnership with the private sector; second, towards facilitating and institutionally addressing coordination needs across multiple stakeholders at various levels of government and across diverse government agencies; and third, for cross border T3, political commitment amongst the countries involved; (iii) need to undertake detailed economic and technical analysis to identify business opportunities, infrastructure needs, and policy and regulatory prerequisites;

and (iv) need to maintain a long term horizon and sustained commitment over a period, of a decade or more.

130. This study has addressed the first step above – starting from CAREC Corridor 1, it has focusing on exploring T3 potential in the specific context of the Almaty–Bishkek Corridor. It is an initial due diligence or a proof of concept analysis to assess whether institutional initiatives (item (ii) above) should be considered and whether substantive resources be committed (item (iii) above) as part of the next phase of exploring the ABC as an economic corridor.

131. The economic rationale for ABC is clear: it is defined by two endpoints that are both large economic clusters and have had a strong regional profile that each wants to develop further. Almaty is much larger than Bishkek: it is in fact the largest economy in a radius of almost 1,000 kilometers around it, and also has a relatively high density of economic activities. Together, Almaty and Bishkek have an official population of almost 2.5 million inhabitants, which is fairly large by standards of the region. Outside of the PRC, Pakistan and parts of the Fergana valley, it is difficult to find an area where 2–3 million people live in such close proximity. This is a valuable resource, reinforced by close historical, cultural and economic links.

132. The analysis of economic links between Almaty and Bishkek shows markets in the two clusters have some links, but less than what would be expected from anecdotal evidence, and that there is room for far more integration. In part this may reflect transition dynamics since accession of KAZ into the CU, leading to higher barriers and stronger enforcement at borders with non-CU countries, including KGZ. The accession of KGZ into the CU is likely to reduce the trading costs between Almaty and Bishkek substantially. The findings from the primary survey in Bishkek broadly reiterate the close cultural and economic links between KAZ and KGZ firms. Issues such as information barriers, contract enforcement or standards do not appear to pose significant hurdles to trading. The limits to higher trade appear instead to be: xxxxxx (TBD by end of this week).

133. Under the current plans of the Government of Kazakhstan towards agglomeration, spatial transformation and urban development in the country, Almaty will become a much larger economic cluster in the medium term, with possibly another million inhabitants. With major infrastructure investments planned, including urban infrastructure and transport, and plans to diversify into high value services and manufacturing, it is possible to envisage Almaty doubling in the next 7–10 years into a \$80–90 billion regional economic cluster. Almaty can benefit in its growth by tapping into the Bishkek economy, which has lower costs for labor, an educated workforce, and an active entrepreneurial class.

134. Proximity to a large and growing market can, in turn, benefit Bishkek. Both Almaty and Bishkek are seeking to position themselves as regional centers, but through different emphases. While Almaty offers higher quality infrastructure and greater connectivity within the region, Bishkek's strength may lie in providing a business environment that is more geared to attract foreign direct investment through a different political system linked to consensus and transparency.

135. Nonetheless, an aspect central to development of the ABC as an economic corridor is that Almaty and Bishkek are structurally twin cities. Manufacturing plays a minor role in both, which rules out in the short term certain types of economic links found elsewhere in Asian economies, arising from participation in value chains. Trade in primary products has been active between the two, and could possibly be expanded further. Both economies though are predominantly service economies. In some cases, they even overlap in terms of focus areas

such as financial services, tourism, and wholesale and retail trade. Even where there is overlap, it is possible there may be differentiation between the two economies at sub-sector levels. Modern economies increasingly have a vast spectrum of differentiated products and services, densely packed so that a single product or service may have many varieties; it is possible for both Almaty and Bishkek to benefit from specializing in similar but different parts of their focus areas, even in services sectors. An example of this is the role, prior to KGZ accession to the CU, played by Almaty and Bishkek in distribution of imports from the PRC, wherein each carved out a niche based on its own advantages, resulting in the growth of the Dordoi market. Another example is tertiary education, where Almaty offers more recognized brands at a higher cost, while students from the region and other countries are attracted to the affordable value offered by providers in Bishkek.

136. A key conclusion of the study is therefore, that the economic potential to develop ABC as an economic corridor does exist. The study recommends therefore that the CAREC program undertake a more substantive analysis to develop the ABC into the first CAREC economic corridor. This will require a number of specific actions that are presented below, with suggested timelines.

Next steps

Table 5.1: Recommendations towards T3 development of the ABC

No.	Recommendation	Timeline
1	Presentation of study jointly to Almaty and Bishkek administrations and the national governments; collect and incorporate their feedback	September 2014
2	Seek in principle endorsement of KGZ and KAZ governments towards development of Almaty Bishkek Corridor	September 2014
3	Identify and formalize a joint platform for Almaty and Bishkek administrations to coordinate development planning towards ABC under the CAREC program. Explore possibility of a joint meeting of both administrations prior to the Ministerial Conference meeting, to agree on mechanism for cooperation for ABC development.	September/ October 2014
4	Finalize the present study for reporting to the CAREC MC. Seek MC endorsement for the ABC initiative as a "pilot for CAREC Economic Corridor Development"	November 2014
5	Commission detailed sector studies – for agro processing, agro trade (including logistics, cold storage, warehousing, certifications, SPS requirements), tourism, garments and other light industries, financial services, trade in other services. Some of these can be joint sector assessments, others can be done separately for each country but available to both. Objective of each study is to formulate a business case for the sector in terms of the ABC. The studies can be discussed at ABC TF (starting January 2015, completion by May 2015). Report to June SOM	Start January 2015. Progress to be reported to CAREC SOM June 2015; Study ToRs to be reported to the SOM in November 2014
6	Initiate ABC Dialog between city administrations of Almaty and Bishkek; initiate sector-specific consultations with private sector in Almaty and in Bishkek, as part of sector studies above	March/July 2015
7	Consult with governments and DPs to identify urban projects in both cities under longer-term plans, including urban transport and business development, and the financing mechanisms needed	Mar/July 2015
8	Undertake a review of policies towards delivery of services through all 4 modes of supply in both countries; undertake consultations with private sector and government on possible measures for addressing movements of skilled workers and management of migrant labor	Mar/August 2015
9	Identify capacity building and other business support services for sectors in 5 above, and formulate implementation plan for identified needs	April/August 2015
10	Provide the cumulative report (encompassing 5-9 above to CAREC SOM	NFP Consultation meeting 2015 and 14 th CAREC Ministerial Conference 2015
N.B.	A parallel study for domestic T3 in TAJ is being undertaken but not reported here. The study will be presented to TAJ govt in Q1 2014 with progress to be updated to CAREC SOM in June 2015. The TAJ T3 study to be included with ABC in report to 14th MC on T3 in CAREC	

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Table A4.1: List of commodities considered for analysis of price behavior

No.	Commodity description	Tradable	Non-tradable	Regulated /Excisable
Food and alcohol-free beverages				
1	Bread and cereals	X	X	X
2	Meat	X		
3	Fish	X		
4	Dairy products, cheese and eggs	X		
5	Oils and fats	X		
6	Fruits and vegetables	X		
7	Sugar and sweets	X		
8	Other foods	X		
9	Alcohol-free beverages	X		
Alcohol and tobacco				
10	Alcohol	X		X
11	Tobacco	X		X
Apparel and footwear				
12	Apparel	X		
13	Footwear, including repair	X		
Housing services, water, electricity, gas and other fuels				
14	Housing rent		X	
15	Materials for repair of housing	X		
16	Services for housing maintenance and repair		X	
17	Water supply		X	X
18	Electricity, gas and other fuels	X	X	X
Durable consumer goods				
19	Furniture and carpeting	X		
20	Curtains and other home textiles	X		
21	Consumer devices	X		
22	Tableware	X		
23	Small tools	X		
24	Consumables	X		
Health care				
25	Medicines and medical devices	X		
26	Out-patient treatment	X	X	X
Transport				
27	Purchase of vehicles	X		X
28	Use and maintenance of personal vehicles	X	X	
29	Transport services		X	X
Communications				
30	Mail		X	X
31	Telephone and fax		X	
Rest and culture				
32	Audiovisual equipment and cameras	X		
33	Other goods and equipment for rest	X		
34	Cultural services	X	X	
35	Newspapers, books and stationery	X	X	
36	Education	X	X	X
Restaurants and hotels				
37	Public catering		X	
38	Hotels		X	
Assorted goods and services				
39	Personal services	X	X	
40	Other personal goods	X		
41	Other services		X	

Source: Asian Development Bank

N.B. Highlighted items selected for the analysis

ABC Survey Questionnaire

Almaty–Bishkek Corridor Development (ABC) Survey

Supported by the Asian Development Bank (ADB), the Central Asia Regional Economic Cooperation (CAREC) Program, has been promoting regional cooperation amongst its member countries in Central Asia since 2002. Cumulatively, the CAREC Program has mobilized more than \$24 billion in investments in regional infrastructure, particularly transport through regional corridors.

This study is being undertaken by ADB as part of its analytical work supporting development of regional economic corridors. It is focusing on the links between Bishkek and Almaty as well as other cities in proximity to Bishkek. Findings of the study will be presented at the 13th CAREC Ministerial Conference to be held in Bishkek in November 2014.

Your participation and cooperation in the information collected through this questionnaire will help ADB improve the quality of its findings and of recommendations to promote private sector development in Bishkek through enhanced links with regional cities.

All information provided by firms in this survey will be treated as confidential by the ADB. Thank you for your cooperation.

Name of the Firm: _____

Sample ID Number:

Address: _____

Phone Number: _____

Name of Interviewer: _____

Date of interview: _____

Time of interview: _____

Total attempts for interview: _____

Verified by: _____

Questionnaire

Section A: General Firm Characteristics

1. When was the firm started?

2. Do you have more than one business?

(Yes=1, No=2). If yes, discuss with respondent the most appropriate one for the questionnaire

3. Ownership status of the firm:

- 1) Individual owner
- 2) Limited Liability Company
- 3) Joint Stock Company
- 4) Others

4. Areas of activity:

- 1) Dairy/Meats
- 2) Livestock
- 3) Crop production (including fruits and vegetables)
- 4) Other food processing
- 5) Light industry
- 6) Wood/Furniture
- 7) Metal working and machinery
- 8) Other Manufacturing
- 9) Trading
- 10) Trading and production
- 11) Other services (Specify _____)

5. How many employees do you have?

1) Full time:

2) Part time and Contract:

6. Compared to 2011, how many net additional employees have you hired? (negative answers allowed)

a. Full time

b. Part time/Contract

7. Compared to 2011, on an average, how much has your turnover changed every year?

(Negative values for decline, answer in percentage per year)

8. Over the past 3 years, have you made any major investments in your business?
(Yes = 1, No=2)

9. Have you borrowed from a bank since 2010 for investing?
(Yes = 1, No=2)

10. What percent of your sales is to:

Percent

a. Domestic

b. Russia

c. Kazakhstan

d. Rest of the world

11. What percent of your sales is to:

Percent

a. Direct consumers/End users

b. Direct industrial buyers

c. Retailers

d. Wholesalers

12. What percent of your inputs is produced:

Percent

a. Domestically

b. In PRC

c. in Russia

d. Rest of the world

13. What percent of your input purchases is from:

Percent

a. Producers directly

b. Retailers

c. Wholesalers in KGZ

d. Wholesalers in PRC

e. Other wholesalers

Section B: Owner/CEO/GM Attributes

14. Gender:

15. Highest educational attainment:

- 1) Basic Secondary
- 2) General or Professional Secondary
- 3) University

16. Is this the first business started/managed by the owner/manager?
(Yes=1, No=2)

17. Years of employment/business experience prior to
initiating/managing this business:

18. Geographic origin:

- 1) Bishkek
- 2) Kyrgyz (KGZ), outside Bishkek
- 3) Non-Kyrgyz (specify _____)

19. How many times have you traveled to KAZ in the past 6 months? (If none, go to

Question 21)

a. Almaty:

b. Taraz:-----

c. Shymkent:

d. Kordai:-----

e. Others (Specify _____)

20. For the most recent trip, please specify:

Location (Almaty=1, Taraz=2, Shymkent=3, Kordai=4, Others=5)

Primary purpose (Look for buyers/sell=1, Look for suppliers/buy=2, Dealing with government authorities=3, Health= 4, Education=5, General shopping=6, Leisure travel=7, Others=8)

Mode of travel (air =1, own car=2, taxi =3, other=4)

- a. Location:
- b. Primary Purpose:
- c. Mode of travel:
- d. Duration of stay (days):
- e. Total expenditure during the trip (excluding transport):

Section C: Competition, Customs Union (CU)

21. For your business as it operates today, how many direct competitors do you face?

- 1) Less than 5;
- 2) 5-10
- 3) More than 10

22. How important to your own business is competition from imports/outside firms?

(Range from 1=Very Important, 2=Important, 3=Not important, 4=No impact)

If Answer is 3 or 4, go to Question 24

23. (If answer above is 1 or 2), Please identify major source of competition in terms of country? Up to 2 most important (KAZ=1, PRC=2, Russia=3, UZB=4, TUR=5, Others=6 (Specify _____))

Country 1

Country 2

24. When do you expect accession of KGZ into the Customs Union will be finalized?

- 1) 2014
- 2) 2015
- 3) 2016 or later
- 4) Will not happen

25. How will the Customs Union affect your business?

(**Please choose up to 2 most important effects**)

- 1) I will have a bigger market and will be able to expand
- 2) I will be able to get inputs more cheaply
- 3) I will be able to get new technology and become more competitive
- 4) I will have to pay more for inputs
- 5) I will face more competition and may lose business
- 6) It will be more difficult to get workers and raise my costs
- 7) I will have to pay higher wages due to higher costs of living
- 8) I will need to shut down my business
- 9) I will need to relocate my business another CU country
- 10) Others (Specify _____)

26. What actions are you taking at the moment in preparation of the accession of KGZ to the CU?

(Multiple answers allowed. **Up to 3**)

- 1) Identifying potential business partners in KAZ
- 2) Identifying potential business partners in RUS, Belorussia
- 3) Reviewing business practices with PRC business associates
- 4) Looking at new business opportunities
- 5) Carrying out certification of my products in line with CU technical regulations
- 6) Preparing to increasing the size of my business
- 7) Looking at downsizing this business
- 8) Looking for alternative countries for inputs
- 9) None
- 10) Others (Specify _____)

Section D: Links to Kazakhstan (for each of AKTS – Almaty, Kordai, Taraz, Shymkent)

27. Does your firm either sell or buy goods or services directly from firms in Kazakhstan (KAZ)?

(Yes=1, No=2) **If answer is 2, go to Question 47**

28. How many times in a month do you transact (sell/buy) with firms in KAZ?

29. For how many years have you been selling to/buying from firms in KAZ?

30. What percent of your total sales is to buyers from:

1) Almaty

2) Taraz

3) Shymkent

4) Kordai

5) Others (Specify_____)

Percent

31. What percent of your total purchases is from firms in:

1) Almaty

2) Taraz

3) Shymkent

4) Kordai

5) Others (Specify_____)

Percent

32. How many regular buyers do you deal with in:

1) Almaty

2) Taraz

3) Shymkent

4) Kordai

5) Others (Specify_____)

33. How many regular sellers do you deal with in:

1) Almaty

2) Taraz

3) Shymkent

4) Kordai

5) Others (Specify_____)

34. How is the price decided with your major business transactors?

- a. Price given by me
- b. Price specified by other party
- c. Price is known to all in the market
- d. Price negotiated
- e. Others (Specify _____)

35. If selling to firms in KAZ, do you produce to order?

(Yes=1, No=2)

36. On what basis do you purchase from your main sellers in KAZ?

Percent:

1) cash basis/advance payment

2) credit

3) consignment

37. On what basis do you sell to your main buyers in KAZ?

Percent:

1) cash basis/advance payment

2) credit

3) consignment

38. Have you had any serious disputes with business parties in KAZ relating to quality, timeliness, damage?

(Yes=1, No=2) **If no, skip to question 40**

39. If yes, how did you resolve it?

- a. Bilateral negotiation
- b. Legal proceedings
- c. Accept losses
- d. Others (Specify _____)

40. How do you look for new buyers/sellers?

(Up to 2 choices, ranked in importance)

- 1) Internet search
- 2) Word of mouth
- 3) Sales force
- 4) Advertising
- 5) Business fairs
- 6) Visual display
- 7) Others (Specify _____)

41. From where are the products you purchase physically obtained?

- a. From producer's warehouse at border in KAZ
- b. From producer's warehouse at border in KGZ
- c. From producer's warehouse in KAZ
- d. From producer's warehouse in KGZ
- e. From wholesaler's warehouse
- f. From trucks sent by supplier
- g. Others (Specify _____)

42. What is typically the cost of transport as a percentage of the value of consignment, including everything?

43. What is typically the total cost of unofficial payments as percentage of total consignment value?

44. What percentage of unofficial payments is paid at the border?

45. What is the main source of barriers/hurdles on trade of goods?

- 1) Unofficial payments at border crossing
- 2) Unofficial payments at customs clearance
- 3) Controlled access to markets
- 4) Availability of accredited laboratories
- 5) Recognition of certificates of conformity

46. How often do employees of the firm travel for business reasons to KAZ (Almaty, Kordai, Taraz or Shymkent) during a month?

(Skip to Section E after this question)

- a. Almaty: _____
- b. Taraz: _____
- c. Shymkent: _____
- d. Kordai _____
- e. Others: _____

47. If no transactions with KAZ, do you buy/sell directly with firms in any other country?
(Yes=1, No=2) ☐

48. Have you tried in the past to transact with firms in KAZ?
(Yes=1, No=2; **If No go to Q 50**) ☐

49. Why did the deal not happen? ☐ ☐
(Up to 2 answers)

- 1) Price was not acceptable
- 2) Quality was not possible for me
- 3) Quantity was too large/too small
- 4) Not enough trust between us (timely delivery, quality, payment etc)
- 5) I did not have enough funds to arrange the transaction
- 6) There were too many bureaucratic barriers in doing the deal
- 7) Others (Specify _____)

50. Why have you not attempted to buy/sell directly from firms in KAZ? ☐ ☐
(Up to 2 answers)

- 1) It is not profitable for me to sell there because the price is not good enough
- 2) It is not profitable for me to buy/sell there because the cost of transport is too much
- 3) There are too many bureaucratic procedures to buy/sell outside
- 4) I do not know anyone there who I can do business with
- 5) I am fully busy catering to the market in Bishkek and cannot expand more
- 6) I can buy all my inputs at a good price in Bishkek
- 7) I have good relationship with suppliers in Bishkek and I can follow up with them if there is any problem
- 8) Others (Specify _____)

Section E: Others

51. Do you interact regularly with businessmen from:

(Yes = 1, No=2)

a) Almaty

b) Taraz

c) Shymkent

d) PRC

e) RUS

f) Other countries

52. What do you identify as the 2 biggest obstacles to being able to sell to or buy from firms in Almaty/Taraz/Shymkent?

53. What actions should government take to help you become more competitive in trading with other countries?

54. Looking ahead over next 3 years, how optimistic are you about your business in terms of its profitability and growth?

(Very optimistic=1, Optimistic=2, Neutral=3, Pessimistic=4, Very pessimistic=5)