



JANUARY 23-25, 2010 THUN, SWITZERLAND

EURASIA EMERGING MARKETS FORUM

Trade and
Transport in
Central Asia

Richard Pomfret



**Emerging
Markets
Forum**

A nonprofit initiative of the Centennial Group

Bringing people together to
accelerate growth and
well-being in emerging markets

Trade and Transport in Central Asia

Richard Pomfret¹

Until 1991 Central Asia was part of the integrated economic space of the Soviet Union without borders and with a relatively efficient transport network. The role of the Central Asian republics in the Soviet division of labour was as providers of raw materials, primarily cotton, minerals, and energy products. The major defect of the transport network was the poor connectivity to the east or south; roads and railways led north or west to the Russian republic, and the eastern and southern borders of the Soviet Union were effectively closed to trade.² The dissolution of the Soviet Union in December 1991 was a huge unanticipated shock to Central Asia. The following decade was dominated by nation-building and the transition from central planning to a market-based economy. All of the Central Asian countries experienced falling output and increasing inequality and poverty. The region also went through a decade of disintegration as border crossing posts were erected along frontiers which had been mere lines on a map in the Soviet economy. Transport infrastructure generally deteriorated, with road and railway building often focussing on nationalizing networks rather than improving the regional network.³

A common characteristic of the Central Asian countries is their openness, as measured by the ratio of exports to GDP (Table 1). Their exports continue to be concentrated in a handful of primary products with differing transport requirements. One reason for Uzbekistan's relatively good economic performance between 1992 and 1996 was that its principal exports, cotton and gold, have high value/weight ratios and

1 Professor of Economics, University of Adelaide, Adelaide SA 5005, Australia, richard.pomfret@adelaide.edu.au. Background paper prepared for the second Eurasian Emerging Markets Forum meetings in Bern, Switzerland, on 23-25 January 2010. I am grateful to Johannes Linn for helpful comments on an earlier draft.

2 The only railway line that did not go to Russia was completed in 1990 between Kazakhstan and China. In 1997 a rail link between Turkmenistan and Iran was opened. Roads between Central Asia and China were closed after the Sino-Soviet split; they only gradually reopened in the 1980s, and were in poor condition.

3 The initial problems and longer term development of Central Asia are addressed in my books (Pomfret, 1995; 2006). Disintegration is analysed in Linn (2004). There were many examples of major roads crossing borders for a few kilometres (e.g. the Tashkent-Samarkand road goes through Kazakhstan, the Almaty-Shymkent road through the Kyrgyz Republic, and the Jalalabad-Osh road through Uzbekistan); frequent closure of borders or rapacious behaviour of traffic police towards foreign vehicles encouraged nationalization of networks even though it was wasteful for the region.

Table 1 | Openness and Major Exports

Country	Exports/GDP		Major Exports
	2006	2007	
Kazakhstan	51	49	Oil, minerals, iron and steel, grain
Kyrgyz Republic	42	45	Gold, cotton
Tajikistan	23	21	Aluminium, cotton
Turkmenistan	72	63	Gas, cotton
Uzbekistan	38	40	Cotton, gold, gas

Source: World Bank World Development Indicators at www.worldbank.org.

could be shipped by air. Kazakhstan was less fortunate, although its coal and minerals, as well as grain from northern Kazakhstan, could be exported reasonably well along existing rail links. Oil and gas exports were more problematic, because pipelines, the most efficient transport mode, all ran through Russia leaving Kazakhstan and Turkmenistan vulnerable to high transit fees charged by the Russian pipeline monopoly and, in the case of gas, subject to non-payment by monopsonist buyers.⁴ By many measures the Central Asian countries trade below their potential, and the returns to integration in the global economy in terms of higher living standards have been disappointing.⁵ The most serious transport obstacle was that the combination of shortcomings in hard and, especially, soft infrastructure was not conducive to the emergence of new exports.⁶

Trade in Central Asia is hindered not just by poor transport infrastructure. At least as important are the high costs of doing business in Central Asia. The most

4 The non-payment problem became so severe that Turkmenistan cut off supplies to Ukraine in 1997 and only resumed them in 1999. Oil exports are less problematic because there is a world market and transport by rail is a feasible, albeit inferior, alternative to pipelines.

5 See, for example, the analysis by the Asian Development Bank (ADB, 2006, 18-21).

6 Hard infrastructure refers to items usually included under transport investment, such as roads, ports, railways, and so forth. Soft infrastructure refers to the set of institutions and practices that affect the costs of doing trade, such as customs procedures, trade-related finance or IT services; improvements in soft infrastructure are synonymous with trade facilitation.

Table 2 | **Ease of Doing Business and Logistics Performance Index (LPI)**

Country	Overall Ranking	Trading Across Borders	LPI
Azerbaijan	38	177	111
Kazakhstan	63	182	133
Kyrgyz Republic	41	154	103
Tajikistan	152	179	146
Uzbekistan	150	174	129

Source: World Bank Doing Business 2010 <http://www.doingbusiness.org/EconomyRankings/> and LPI <http://info.worldbank.org/etools/tradesurvey/mode1b.asp?sorder=ipirank&cgroup=0#>.

Notes: the Doing Business rankings cover 183 countries in the period June 2008 to May 2009; the LPI covers 150 countries in 2007; Turkmenistan is not ranked but clearly has the worst conditions in Central Asia.

commonly used measures are the World Bank's survey-based indicators reported in Table 2. The overall Ease of Doing Business rankings highlight the gap between conditions in the more and less reformed economies, with Azerbaijan, the Kyrgyz Republic and Kazakhstan all ranking higher than, for example, Italy. The ease of trading across borders indicators, however, paint a much bleaker picture with all five countries in Table 2 ranking among the bottom 30 of the 183 countries covered. They also rank among the bottom third of countries by logistics performance. Other commonly used indicators such as the World Economic Forum's Global Competitiveness Report, the Heritage Foundation's Index of Economic Freedom, and the Transparency International Corruption Perceptions Index indicate a business environment in Central Asia among the poorest in the world.⁷

On the positive side, traditional trade barriers such as with any survey-based indicators, the individual rankings should be taken with a pinch of salt (e.g. that Uzbekistan has better conditions than Kazakhstan for international traders does not fit with casual observation), but the general picture of the region being unfriendly to international traders is highly credible. Denis de Tray's paper for the January 2010 Emerging Markets Forum analyses these rankings in greater depth, and emphasises the gap between good regulations on paper (as in the Kyrgyz Republic) and actual implementation, as well as the universally high levels of corruption in Central Asia according to all international comparisons. Many sources omit Turkmenistan because it is difficult to identify just how hard it is to do business there, but when Turkmenistan is included it invariably ranks close to last in the world.

as tariffs are low in Central Asia and preferential trading arrangements are of minimal importance. Most trade is conducted on a multilateral basis in world markets, although only one Central Asian country has joined the World Trade Organization. The Kyrgyz Republic was in 1998 the first Soviet successor state to join the WTO and its trade policy continues to be characterized by low tariffs. Kazakhstan's negotiations are in the final stages, but the political will to reach a conclusion has been lacking.⁸ Uzbekistan applied for WTO membership in 1994, but negotiations continue to move at a glacial pace. Tajikistan applied in 2001 and a Factual Summary of the country's policies was tabled in 2005, putting its negotiations ahead of Uzbekistan's. Turkmenistan has not applied. The Central Asian leaders have been more active in signing a plethora of regional arrangements, many of which have contained reference to free trade areas, customs unions or common economic space, but the only one to have any impact is the Eurasian Economic Community (EurAsEc) and its preferential tariff arrangements are modest in practice.⁹

By the turn of the century the essentials of nation-building and transition from central planning were complete, albeit with very varied and imperfect market-based economies. The next decade saw rapid growth in the region, but with widening disparities as Kazakhstan and, to a lesser extent, Turkmenistan and Uzbekistan benefited from the oil and commodity price boom, while resource-poor Tajikistan and the Kyrgyz Republic fared less well. Serious interest in improving the regional transport network dates from the mid-2000s, stimulated by a series of reports from multilateral organizations that highlighted the economic shortcomings of existing trade, transport and transit arrangements (World Bank, 2004; UNDP, 2005; ADB, 2006).

⁸ A draft Working Party Report, usually the final stage of accession negotiations, was completed in 2005, and since then Kazakhstan's accession has been expected "next year". There was a theory that Kazakhstan, Ukraine and Russia would coordinate their accession, but Ukraine joined the WTO in 2008. Russia's negotiations appear to be on hold.

⁹ Although EurAsEc claims that a large number of tariff lines have been unified to create a common external tariff, these are non-controversial items with low or zero tariffs. If the Kyrgyz Republic or Kazakhstan were to raise their tariffs to Russian levels, they would suffer serious welfare loss (Tumbarello, 2005). Moreover, the Kyrgyz Republic could only do so by breaking its WTO commitments on bound tariff rates.

Table 3 | Trade of Central Asian Countries, 2000-8 (billion US dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Kazakhstan - exports	8.8	8.6	9.7	12.9	19.9	27.8	38.2	47.8	71.2
Kazakhstan - imports	5.0	6.4	6.6	8.4	12.6	17.4	23.7	32.8	37.8
Kyrgyz Republic - exports	0.5	0.5	0.5	0.6	0.7	0.7	0.8	1.1	1.6
Kyrgyz Republic - imports	0.9	0.5	0.6	0.7	0.9	1.1	1.7	2.4	4.1
Tajikistan - exports	0.8	0.7	0.7	0.8	0.9	0.9	1.4	1.5	1.4
Tajikistan - imports	0.9	0.7	0.7	0.9	1.4	1.3	1.7	2.5	3.3
Uzbekistan - exports	2.8	2.8	2.5	3.2	4.3	4.7	5.6	8.0	10.4
Uzbekistan - imports	2.7	2.7	2.4	2.7	3.4	3.7	4.4	6.3	7.1

Source: Mogilevsky, 2009, from UN COMTRADE database

Central Asia's international trade has expanded rapidly since 2000 (Table 3), led by energy exports from Kazakhstan and by imports from China. Tajikistan's trade deficit is largely financed by remittances. The Kyrgyz Republic earns service income as a regional entrepot, selling Chinese goods in two huge bazaars to customers from other Central Asian countries, principally Uzbekistan, although the size of intra-Central Asian trade in Chinese goods is difficult to measure.¹⁰ The expansion of trade is both cause and consequence of improvements in hard and soft infrastructure and of more positive official attitudes towards institutions such as CAREC. Nevertheless, as Table 2 highlights, much still needs to be done to bring the ease of trading across Central Asia's borders up to global norms.

Questions to be asked

The benefits of trade for development are almost universally accepted. Turkmenistan and Uzbekistan adopted

import-substituting industrialization strategies in the 1990s, but these have not yielded benefits and have become less prominent. All of the Central Asian countries wish to reduce dependence on a handful of primary products by diversifying their economies, and would like the growth of these new products to be export-led. This raises the question of what kind of goods could be exported and what is the appropriate transport network? Without advocating "picking winners", it is important to consider the relationship between comparative advantage and mode of transport to determine whether investment should be in road and rail links to ocean ports or in airports and related logistics.

A more dramatic way of rephrasing the question is to ask: Does Central Asia have the potential to become the crossroads of Eurasia or is it condemned to being a landlocked backwater? The answer, which depends upon the interaction between geographical givens, modes of transport and the commodity composition of trade, is critical for determining what kind of transport infrastructure is appropriate.

The current approach advocated by Central Asian Regional Economic Cooperation (CAREC) and the UN Special Programme for the Economies of Central Asia (SPECA) and by regional organizations such as the Eurasian Economic Community (EurAsEc) or the Shanghai Cooperation Organization (SCO) is to promote

¹⁰ The measurement problem is clearly visible in mirror statistics. China reported exports to the Kyrgyz Republic of \$9,213 million in 2008, while the Kyrgyz statistics indicate imports of \$728 million from China; in principle, import value should exceed export values in bilateral trade because they include transport, insurance and other costs, but China's reported exports are more than twelve times as large as Kyrgyz reported imports (Mogilevsky, 2009, Table 5). The large discrepancy may reflect underreporting by Kyrgyz customs, but with low tariffs there is little incentive for smuggling into the Kyrgyz Republic. More plausible is that a large share of the Chinese exports are re-exported and thus not counted as imports by the Kyrgyz authorities (Kaminski and Raballand, 2009), but the extent of re-exports is not picked up in other countries' import data because there are incentives to smuggle into the more regulated economies of Uzbekistan and Turkmenistan. The two bazaars are Dordoi outside Bishkek and Karasu outside Osh.

transport corridors, with the idea of improving both hard and soft infrastructure along the corridors. This permits a gradual approach, led by the more willing participants. It also raises the question of whether transport corridors can become economic corridors rather than just means of getting goods from A to B and, if so, how can this be promoted?

There are also institutional questions about the role of multilateral agencies or regional organizations in brokering cooperation among national governments which have shown little taste for cooperation over the last two decades. Is the substantial overlap of the corridors of CAREC, SPECA, EurAsEc and the SCO healthy organizational synergy or wasteful duplication?¹¹ Given the limited resources and the high cost of transport investment over the large distances of Central Asia, how can private sector funds be mobilized to supplement domestic and international public financing, and will the global economic downturn of 2008-9 impact on funding?

What is the right approach when some countries do not participate in regional schemes to improve transport and trade, or maintain closed borders? The isolationism of Turkmenistan under President Niyazov, aka Turkmenbashi the Great, is a major reason why the railway south to Iran has had minimal economic importance; Turkmenistan's position has eased since Turkmenbashi's death in December 2006, but the approach of President Berdymukamedov remains unclear. Uzbekistan, at the heart of Central Asia, is less open and liberal with respect to transit than its neighbours would like. Should transport networks be designed to avoid recalcitrant states, and to what extent should networks be planned in the geographically optimal way, leaving open the option of bringing in non-participants at a future date? The question is especially apposite given the super-presidential political regimes

¹¹ The situation is complicated by differing but overlapping membership. Turkmenistan is only in SPECA. Kazakhstan, the Kyrgyz Republic, Tajikistan and Uzbekistan are in all four groupings, but Uzbekistan ceased to participate in EurAsEc in 2008. EurAsEc includes Russia and Belarus, the SCO includes Russia and China, and CAREC includes Afghanistan, Azerbaijan, China and Mongolia. All five Central Asian countries, together with Afghanistan, Azerbaijan, Iran, Pakistan and Turkey, are also members of the Economic Cooperation Organization (ECO), but ECO's actual impact is minimal.

Table 4 | **Container Freight Tariffs
China to Western Europe**

	20 foot container (US\$)	40 foot container (US\$)	Time (days)
Shanghai-St. Petersburg - Sea	1,980	3,170	32
Shanghai-Moscow - Rail	3,585	6,510	15

Source: Vinokurov et al., 2009, 32.

and the possibility of major policy shifts when the current incumbents are no longer in power.

The Crossroads of Eurasia?

In the thirteenth century, when the pax mongolica following Genghis Khan's establishment of the largest land-empire in history permitted long distance trade between East Asia and Europe, Central Asia lay at the crossroads of Eurasia (Findlay and O'Rourke, 2007). The Silk Road, which involved several corridors, passed through Central Asia connecting Europe and western Asia with China. Bukhara and Samarkand became among the great cities of the world. Then, the Portuguese discovered sea routes to East Asia. Central Asia became a fragmented and unstable backwater of despotic emirs until it was absorbed into the Russian Empire and subsequently became part of the Soviet Union.

When the Central Asian countries became independent in 1991, they revived the imagery of a new silk road and the Crossroads of Asia. However, although it is geographically at the centre of Eurasia, Central Asia is hardly a major crossroads. At current prices, overland transport from China to Europe is not price-competitive. According to estimates by the Eurasian Development Bank (Table 4), the cost of sending a container by rail from Shanghai to Moscow is roughly double the cost of sending a container by sea from Shanghai to St. Petersburg. The advantage of sea would be even more

pronounced if the container were loading in Japan or South Korea or going to Western Europe. The only advantage that overland transport has is time (Table 4).

The “Crossroads of Asia” was a slogan of Uzbekistan Airways in the 1990s. Uzbekistan Airways flourished in the 1990s as a backpacker airline from Europe to India and East Asia, and Tashkent is still a hub for Indians travelling to western Europe, but it is hardly a major hub and is threatened by competition from direct flights as India deregulates its airline industry and efficient new carriers emerge. Today Central Asian air transport is generally inconvenient and expensive, and nobody would transit the region if travelling between Europe and Asia. If there is a Central Asia hub it is Istanbul airport, as the western gateway to Central Asia.

However, some of these comparisons reflect the poor state of transport infrastructure in Central Asia. Air Astana has shown how a new efficient airline could contribute to making Almaty a passenger hub, although it is so far more important in improving the price/quality competitiveness of travelling to and within Kazakhstan. Almaty and Astana are hubs for Western air cargo shippers such as Lufthansa.

The rail journey may be faster than sea, but it is slower than it should be for the distance involved. Between Shanghai and the EU border (Poland) there are two changes of gauge and four border crossings, all of which can be painfully slow. Add in low quality track and there is a classic mixture of poor soft and hard infrastructure combining to make the rail option more unattractive than it should be. Indeed, whereas sea should potentially be the less reliable option due to bad weather and piracy, rail times are even more variable.¹² With better track and rolling stock and less delay at the borders, the rail time could be much less than fifteen days from China to Europe, and hence competitive, especially if the final destination is an inland town rather than close to a

12 Chinese sources cite longer times than in Table 4, e.g. The China Economic Review reports 30 days from Shanghai to Moscow - <http://www.chinaeconomicreview.com/logistics/2006/11/16/soyuztranslink-china-moscow-rail-freight-services/> Early efforts at monitoring CAREC corridors have found that average speeds of trains between China and Russia through Central Asia are less than half those in Western Europe.

seaport.¹³

On some routes road transport is competitive for some freight. On a map the E40 runs from Berlin to Tashkent and large European trucks do use this route, especially from Poland and Ukraine to Uzbekistan. However, the traffic is not heavy because hundreds of kilometres of the road are unpaved across the desert of western Kazakhstan and the Karakalpak region of Uzbekistan, and in the middle of this bleak stretch is an inhospitable border crossing point.¹⁴ As with the rail network, Central Asian roads need both physical improvement and better soft infrastructure - not just easier border crossing, but also less regulatory restriction on axle weights, transit conditions and so forth, and less harassment by police.

In sum, dramatic images of new silk roads or continental crossroads present a misleading picture. Central Asia's location advantages are not those of the fourteenth century. Today overland transport cannot match ocean shipping costs for bulk goods that are not time-sensitive. Nevertheless, the picture need not be bleak. Central Asia is surrounded by some of the world's most dynamic economies and some long distance transport can be competitive if it is efficient. The challenge is to identify comparative advantages in transport as well as in trade. That will require public policy and public investment because transport is an area of large fixed costs and positive externalities, but in a way that allows market forces to guide decisions. The top-down planning and collaboration needs to be flexible enough to avoid compounding wasteful spending on unnecessary infrastructure while allowing responsiveness to unforeseen demand for increased capacity on certain routes or by certain modes. The current approach to this challenge

13 The United Nations Development Programme (2005) human development report for Central Asia estimated that costs and time could be halved for “normal” transport conditions. World Bank estimates of the benefits from feasible road improvements also find that transport costs could be halved (Shepherd and Wilson, 2006).

14 Trucks can wait for hours at both the Kazakhstan and Uzbekistan border crossing points, even though the traffic is light. To add to the inconvenience the two countries make little effort to coordinate the opening times of the two border posts. As part of its current investment in infrastructure improvement, Kazakhstan is upgrading its section of this route as well as the spur to the port of Aktau, but international truckers will still have to cross the inhospitable border and face several hundred kilometres of unimproved road in Uzbekistan.



in Central Asia is to identify corridors for priority investment combined with trade facilitation.

The Corridor Approach

The first attempt to create corridors across Central Asia was the Transport Corridor Europe-Caucasus-Central Asia (TRACECA) programme established by the EU in 1993 to develop an efficient and integrated transit transport system between Europe, the Caucasus and Central Asia.¹⁵ The timing in the 1990s was not conducive to cooperation among the Central Asian governments and the focus on transport from Central Asia to Europe via Baku and Poti, involving ferry crossings of the Caspian Sea and the Black Sea, ran into problems of competitiveness; freight costs from Tashkent to Europe via Baku are almost double rail freight costs via Russia. The TRACECA route carries mainly oil, plus some cotton and grains, but operates well below projected capacity. Apart from funding and managerial problems, TRACECA's fatal flaw is its promotion of a route which is ill-suited to most freight due to the two sea crossings, and not helped by the isolationist policies of Turkmenistan which has the main Central Asian port on the Caspian.

During the 1990s and early 2000s it became increasingly clear that the obstacles to international trade in Central Asia were not just poor physical infrastructure. Police and customs officials supplemented their incomes through bribes; e.g. a much publicized figure, of doubtful provenance but plausible to many observers, was that a truck travelling north from Bishkek would pay \$1700 in bribes by the time it had crossed the Russian border.¹⁶ As borders became less porous, visa regimes were introduced, and trade regulations and taxes were frequently changed, the cost and risks of international trade mounted in the early 2000s. If trade were to be

promoted, the soft infrastructure of trade facilitation had to be improved as well as the hard infrastructure of rail, road air and sea ports.

The Asian Development Bank took an important lead in November 1999 by designing a Cross-Border Agreement (CBA) which accompanied its financing of upgrading of the Almaty-Bishkek road. Under the CBA, the Kazakh and Kyrgyz governments made commitments to facilitate border-crossing procedures. The ADB acted as honest broker, balancing and monitoring the commitments, but more importantly the agreement highlighted the connection between investment in hard infrastructure and improvement of soft infrastructure.¹⁷ On a large scale, the ADB played similar roles in the evolution of CAREC.¹⁸

CAREC's Transport and Trade Facilitation Strategy coalesced around identification of a number of corridors, along which donor activity would be coordinated (Figure 1).¹⁹ The corridor concept was also taken up by the Eurasian Economic Community (EurAsEc) and the Shanghai Cooperation Organization (SCO).²⁰ The EU has, since 2007, also tried to reorient its main regional program in Central Asia (BOMCA-CADAP) from border management to control the drug trade towards a more balanced risk assessment to facilitate legal trade as well as prevent illicit trade.

Why corridors? Corridors combine investment in

¹⁵ The Multilateral Agreement on International Transport for Development of the Europe – the Caucasus – Asia Corridor was signed in Baku on 8 September 1998 by twelve countries, including four from Central Asia and Azerbaijan; Turkmenistan was subsequently included in TRACECA.

¹⁶ In the worst case, the high costs discouraged trade completely. The example of the cessation of Kyrgyz onion exports to Russia is described in my book (Pomfret, 2006, Chapter 10.4).

¹⁷ The ADB's November 2008 validation report on the Almaty-Bishkek Regional Road Rehabilitation Project is available at <http://www.adb.org/Documents/Reports/Validation/KAZ/in386-08.pdf>

¹⁸ CAREC members are Afghanistan, Azerbaijan, China (represented by the national government, for projects in Xinjiang and Inner Mongolia), Kazakhstan, the Kyrgyz Republic, Mongolia, Tajikistan, Uzbekistan, and six multilateral institution partners: the ADB, which hosts the Secretariat, the European Bank for Reconstruction and Development (EBRD), the International Monetary Fund (IMF), the Islamic Development Bank (IsDB), the United Nations Development Programme (UNDP) and the World Bank.

¹⁹ The CAREC Transport and Trade Facilitation Strategy approved at the 6th Ministerial Conference in Dushanbe in November 2007 identified six priority transport corridors, potentially linking Central Asian countries with each other and with their neighbours from China to Europe, and from the Indian Subcontinent to Russia (CAREC, 2007). The Action Plan identified a set of priority investment projects and technical assistance initiatives to be implemented over the next decade to improve the multi-modal transport network and border crossing, transit and logistics management along the priority corridors, and also envisaged monitoring of transport cost and time along the corridors in order to ensure that the investments actually secured the intended benefits. Financing, estimated at \$21 billion for investments and \$69 million for technical assistance, was to come from countries' own resources, from loans and grants by the multilateral institutions, and from other external financing (Linn, 2008).

²⁰ The EurAsEc transport corridors are described in Vinokurov et al. (2009).

hard and soft infrastructure, and are amenable to monitoring (e.g. by time-cost studies of a standardized truck or container) which permits ex post evaluation of policy actions and identification of opportunities for further incremental change. Monitoring is feasible (and pilot studies have already been completed), and provides information for evidence-based policy evaluation.²¹

The corridors currently identified by CAREC/EurAsEc/SCO have important advantages over TRACECA. The number of corridors provides flexibility, although this must be balanced against concerns about diffusion of effort and resources. Whereas TRACECA focused fairly single-mindedly on improving rail freight transfer from Central Asia to Europe via Baku, the current corridors permit multiple use and priorities can respond to demand. The Almaty-Bishkek road upgrade was an important project because that three-hour drive between the capital of the Kyrgyz Republic and the financial and commercial centre of Kazakhstan is used for many reasons, some local-trade-related, some promoting longer distance trade (e.g. allowing business visitors to Bishkek to use the better-served Almaty airport²²) and some only indirectly related to trade. The first major investments in the CAREC corridors have been on the stretch of Corridor 1 between Almaty and Shymkent, which is part of a China-Russia corridor, but is also the main Almaty-Tashkent road and principal artery of southern Kazakhstan.

Such flexibility is more in tune with 21st century economics than the top-down approach of TRACECA in which EU planners appeared to replace Soviet

planners. Public/private cooperation has so far been limited, but national/multilateral cooperation is flourishing. The Almaty-Shymkent road upgrade is progressing because the Kazakhstan government sees value in the project. China's designation of Inner Mongolia, as well as Xinjiang, as a CAREC region reflects national interest in promoting links with southern Mongolia. Although public/private cooperation has yet to emerge and the global slowdown in trade in 2009 does not provide a favourable environment for private investment, specific projects could be important for individual investors, e.g. the Mongolia - Inner Mongolia connection may attract financing by Rio Tinto which is anxious to build a rail link.

Flexibility is important because a map such as that presented by Johannes Linn at the First Eurasian Emerging Market Forum meeting in 2009 can be interpreted in different ways (Figure 2). As well as being a crossroads between Asia and Europe, Central Asia can be seen as a location favoured by a neighbourhood of booming economies. Much debate about Central Asian transport has concerned the disadvantage of landlockedness and access to ocean ports. This is important for some products, but the domestic markets of China, India, Iran, Russia and Turkey could be at least as important as access to these countries' ports.

The ideal transport network for Central Asia would have good quality road and rail connections in all of these directions, so that the countries could reorient their trade as one neighbour boomed or another experienced disruption. It would also involve efficient air services for time-sensitive or high value-weight items and a pipeline network for oil and gas. The prospect of export diversification into products and markets that are difficult to predict highlights the need to retain flexibility to improve any mode of transport to any market.

Flexibility is also important for addressing the issue of what to do when a Central Asian state closes itself off or makes transit unattractive. A denser network or a menu of corridors provide alternatives. The development of Aktau port on Kazakhstan's Caspian shore, for example, allowed direct trade from Kazakhstan to Baku

²¹ The value of the corridors approach has been illustrated by World Bank projects in Africa. Examining the costs associated with transporting goods on four corridors involving thirteen countries of which seven are landlocked, Teravaninthorn and Raballand (2009) find that transportation costs along these corridors are much higher than in other developing countries and that the difference is due to informal payments and high profits earned by trucking companies; the main source of high profit margins is regulations that restrict entry of new companies. Teravaninthorn and Raballand point to Rwanda as an example of a landlocked country that deregulated its transport sector and quickly benefited from a dramatic drop in transport prices. For Zambia, regional liberalization of trucking services had a significant impact on transport costs (Raballand, Kunaka and Giersing, 2008). These studies emphasise the importance of gathering evidence and publicizing the benefits of reform in order to motivate policymakers in the face of vested interests which benefit from trade-restricting regulations.

²² The KLM Amsterdam-Almaty, for example, is met by a connecting bus service to Bishkek. Many travellers to destinations in the northern Kyrgyz Republic organize a car to meet them at Almaty airport.

without passing through Turkmenistan and this was also used by Uzbekistan, some of whose trade has been diverted to this route which is longer but less troublesome than using Turkmenbashi port. Uzbekistan's restrictive border policies encouraged the Kyrgyz Republic to nationalize its road network so that the main Osh-Bishkek road no longer passes through Uzbekistan, and has encouraged Tajikistan to use routes via Osh and Almaty rather than via Tashkent.

In sum, transport development in Central Asia should be multi-vectorised, serving cross-regional trade, linking Central Asia to ocean ports, neighbouring economies and regional markets, and promoting more local trade. Effective transport corridors, responding to actual and latent demand should have the potential to become economic corridors. At a minimum (and in the more isolated stretches of roads across deserts this is the most that can be expected) the economic spillovers will involve service stations and food outlets, but elsewhere as has happened along the Almaty-Bishkek road (especially in the link to Almaty airport) there are opportunities to develop economic growth poles with superior logistics. In the longer term, the corridors will hopefully become part of an efficient transport network, and the nodes or densely travelled sections should be attractive locations for businesses that do not require city centre locations.

Institutional Roles

Multilateral agencies or regional organizations can play a role in kick-starting regional cooperation in a region where cooperation has been in short supply over the last two decades. Regional cooperation is important because connectivity within the region and to large economies surrounding Central Asia is the necessary first step to integrate the region into the global economy. This can only be bypassed by air transport, which is only really suited to a narrow range of goods.

CAREC has been the most successful of multilateral initiatives because it started low-key and established

itself through a long period of confidence-building.²³ Whether the projects now being funded by CAREC partners would have happened without CAREC is an open but almost irrelevant question, because raising issues (e.g. the importance of soft infrastructure) and bringing senior officials and then ministers together was the crucial role played by CAREC. Similarly, whether CAREC or EurAsEc or the SCO can claim credit for investment along, say, CAREC corridor 1, which all three recognize as a major corridor, is less important than their joint efforts to promote the concept and encourage national participation and cooperation.

Funding is obviously important. The last decade has witnessed a huge divergence in economic prosperity in Central Asia as relative growth rates were overwhelmingly determined by oil and gas output. Kazakhstan can afford to fund key national projects and is in the process of improving its national transport network, while the Kyrgyz Republic and Tajikistan remain impoverished and will require soft loans or grants if many key projects are to be completed.

The Annex reviews the current state of projects along the six CAREC corridors.

Pipelines

The most contentious and highly publicized elements of Central Asian trade and transport have been pipelines. The region is rich in oil and gas, for which pipelines are the least-cost means of transport, but large construction costs mean that only a limited number of pipelines are justified. The mutually exclusive nature of pipelines and Central Asia's location have led to pipeline projects becoming the stuff of high politics.

At independence, all pipelines led to Russia and were controlled by Transneft. The first oil pipeline from the Caspian not under Transneft control opened in 2001 and the first to bypass Russia, the Baku-Tbilisi-Ceyhan

²³ CAREC's origins lay in some regional projects in the ADB in the late 1990s, creation of the Central Asian Regional Economic Cooperation Unit in 2000, and establishment of the current institutional structure in 2001. CAREC meetings involve senior officials and ministers. In contrast the United Nations Special Programme for Central Asia (SPECA), launched by the Presidents of the five Central Asian countries in 1998, has had minimal impact.

pipeline, opened in 2005. A pipeline through Kazakhstan to China will be completed soon. These oil pipelines mean that Kazakhstan now benefits from a competitive environment in transporting and selling its oil, so that revenue is equal to the world price minus transit fees that are related to cost rather than monopoly power.

The situation with respect to gas pipelines is more complex. There are no feasible alternatives to pipelines for exporting Central Asian natural gas, and the network remains dominated by Russian routes. A small pipeline was opened from Turkmenistan to Iran in 1997, but only recently has a second non-Russian pipeline begun to be constructed from Turkmenistan through Uzbekistan and Kazakhstan to China. A major ongoing political debate concerns new pipeline routes from Central Asia and Russia to the EU, with the issue being whether the Nabucco project through Turkey is more desirable than investment in pipelines from Russia. An added complication is that technological change is reducing the cost of liquid natural gas (LNG) transportation, which will benefit producers such as Qatar and Australia and seriously erode the competitive position of landlocked producers such as those of Central Asia.²⁴

The economics of pipelines are relatively straightforward, although in practice there are large uncertainties in predicting future oil and gas prices.²⁵ For the Central Asian energy suppliers, the key trade-off is between the scale economies and guaranteed prices offered by existing Russian routes and the benefits of multiple routes in increasing bargaining power and in being able

²⁴ The major constraint on LNG is the high cost of constructing liquefaction plant at the point of shipment and regasification plant at the point of arrival. Technological change is lowering these costs and western European countries such as Spain, Britain and Italy have been investing in regasification plant; the South Hook plant in South Wales that opened in 2009 is Europe's largest, and Italy has recently finished or is constructing three large offshore plant that can process over 20 billion cubic metres a year, equal to deliveries through a large pipeline and important because Italy is a major intended market for Nabucco gas. These developments will allow countries with large gas reserves and port access (e.g. Qatar and Australia) to be highly competitive in European markets given the low ocean-shipping costs relative to the high cost of constructing pipelines.

²⁵ Pipeline construction is more attractive when prices are high; construction was limited in the period of low energy prices up to 1998 and then accelerated with rising oil prices. Oil prices are determined in world markets. Gas prices are agreed in long-term contracts, although in practice they respond to large changes in oil prices as contracts are revised.

to respond flexibly to any disruption in particular routes. For EU customers, the conflict is between reducing dependence on Russian routes (e.g., by promoting the Nabucco project) and keeping good relations with Russia. If the EU's increasing capacity to import LNG reduces demand for gas from Russia and Central Asia, then the natural gas sector in Central Asia will face serious competitive pressures, reinforcing the need for export diversification.

Problems

Landlockedness is often seen as a problem for Central Asia but it could be a strength; the importance of a landlocked country's economic neighbourhood is illustrated by Switzerland. Taking advantage of opportunities requires a transport network and regional arrangements that facilitate trade. The weaknesses are that large distances and inhospitable terrain in Central Asia mean that construction costs can be high, and national governments have not been cooperative in promoting an efficient regional network. Also there are serious problems of governance – which contribute to the inefficiency of cross-border trade and transit arrangements.

Despite the natural ties of a shared culture, history and economic structure and obvious shared problems such as managing the water resources of the two rivers flowing into the Aral Sea, the record of regional cooperation in Central Asia since 1991 has been a sorry tale. Despite many statements of intent and grand plans, there is no regional institution based in Central Asia. Four or five of the Central Asian countries belong to three regional institutions but these all have their secretariats outside Central Asia and tend to be driven by the host country: the Eurasian Economic Community (EurAsEc - secretariat in Moscow), the Shanghai Cooperation Organization (SCO - secretariat in Beijing), and Economic Cooperation Organization (ECO - secretariat in Tehran).²⁶ Cooperation was inhibited by sensitivity about newly won sovereignty and by personal

²⁶ The secretariat of CAREC is run by the Asian Development Bank out of Manila and SPECA by the UN regional commissions in Bangkok and Geneva.

tensions between the autocratic presidents. Some of these negative forces may be ebbing, but as with any falling out among previously close relations an intermediary may be necessary to help heal the rift.

Even when projects are presented as regional, the actual expenditures may be dominated by national priorities. The CAREC-sponsored investment along corridor 1 from China to Europe via Russia (see Annex) is effectively for improvement of the Kazakhstan road system. Upgrading the Amaty-Shymkent road connects the major cities of southern Kazakhstan. The upgrade cuts out a short section that currently passes through the Kyrgyz Republic; the rerouting will facilitate trade by eliminating the need to cross borders, but it will reduce regional integration by isolating the area of the Kyrgyz Republic that now benefits from being on a major international road. Thus, what is by far the largest actual outcome from the corridors approach could easily be presented as part of Kazakhstan's upgrade of its national road system with help from international financial institutions.²⁷ That is not necessarily a bad thing, but it is not regional cooperation and concentrating benefits in Central Asia's richest country will widen economic disparities.²⁸

Conclusions

In Central Asia geography looms large, and presents strengths, weaknesses, opportunities and threats.

The strength of Central Asia's location is that it is surrounded by some of the world's fastest growing economies (including three of the past decade's fast-growing BRICs). Parts of Central Asia could potentially have good links to areas of these dynamic economies by road, rail or short flights.

The weaknesses are Central Asia's inherited

transport network designed to fit the needs of Soviet planners rather than market-driven globalized economies and its landlockedness which inhibits taking advantage of cheap maritime transport. The weaknesses have been exacerbated over the last two decades by nation-building and the severe economic downturn of the 1990s. There were inadequate resources to maintain, let alone upgrade, the inherited transport system, and some scarce resources went on nationalizing transport networks rather than improving the regional network. Perhaps more importantly the regulation of national borders, search for public revenue through levies on traders and spread of petty corruption all increased the cost of doing trade, while sensitivity to newly acquired sovereignty and personal antipathies among the autocratic leaders inhibited regional cooperation. By the 2000s the costs of trade were higher than almost anywhere else in the world due to a disadvantageous mix of poor physical (or 'hard') infrastructure and high transactions costs (or poor 'soft' infrastructure).

The opportunities lie in the potential for substantially reducing the costs of trading and increasing the volume and gains from trade. This is first and foremost a task for national governments, who as everywhere have primary responsibility for maintaining the physical infrastructure and who alone can reduce the red tape and attack the corruption that increases trade costs. Multilateral institutions, bilateral donors and NGOs can also play an important role. During the 1990s Central Asia was relatively neglected among the countries in transition from central planning, but since the turn of the century the multilateral institutions have played a more positive role, especially under the CAREC umbrella, in confidence building, in bringing officials together to discuss best practice, in preparing reports to highlight the benefits from improvements in transport and trade conditions, and in coordinating external financial assistance.

The threats are internal and external. Internally the political systems in all five countries are super-presidential, which permits strong action once the leadership is convinced of the correct measures, but

27 That is, of course, not how the multilateral institutions that are CAREC partners present their financial assistance; see the Asian Development Bank <http://www.adb.org/media/Articles/2008/12702-kazakhstan-silk-road/> or the EBRD's press release on its \$180 million loan financing a section north of Aktobe - <http://www.ebrd.com/new/pressrel/2009/090330.htm>

28 Kazakhstan's national transport plans also include construction/upgrading of local roads feeding into the major long-distance roads, which is likely to enhance the value of major road projects and can help to turn transport corridors into economic corridors.

which may be associated with policies that benefit the leader or the elite rather than the country as a whole (as in Turkmenistan under President Niyazov). The high degree of concentration of power also creates uncertainty about the sustainability of policies given the mortality (or perhaps exposure to coups) of the presidents. The external threat is that great powers both within and beyond the region may view Central Asia in terms of their geopolitical strategy rather than in the interest of the region's people. Fears that a new 'Great Game' would emerge after 1991 were generally not realized, but since the turn of the century this may be changing with the renewed assertiveness of Russia, US military involvement in Afghanistan and Iraq, China's drive for energy and mineral security, and European concerns about dependence on Russian gas.

Recommendations

The first two decades after independence witnessed disappointing economic performance which was exacerbated by policies that worsened or, at best, failed to improve the costs of international trade. Some trade neglect is understandable in a period of nation-building and other economic priorities associated with the transitional recession, and the situation is now improving, albeit unevenly, across the region. A top priority in the third decade is for national policymakers to be proactive in pursuit of further reducing the costs of trade by upgrading both the hard and soft infrastructure. A good starting point, under national control, would be to reduce the bureaucratic obstacles that affect all trade. In international trade the focus should be on choke points, where the time and cost of trade increases substantially, and which can be identified by monitoring the time and cost of trade along key corridors.

Donors and multilateral agencies can facilitate this process by supporting initiatives such as CAREC and by financial support for projects from road-building to form reduction to alerting trade officials to best practice. Financial support is particularly critical for the poorest Central Asian nations, the Kyrgyz Republic and

especially Tajikistan. Multilateral institutions can also provide forums for encouraging regional cooperation and recognition of aspects of national policies that have positive or negative spillovers to neighbouring countries. The multilaterals can also provide settings for encouraging evidence-based policy evaluation and follow-up on the basis of such evaluation, and in the longer term for peer review processes.

What should be avoided is too much top-down planning of transport networks. Some planning and coordination is of course necessary, but with scarce resources it is important to leave flexibility to respond to changing conditions. All Central Asian countries wish to diversify their exports from the current narrow commodity base, but identifying future comparative advantage is difficult and decentralized decision-makers responding to market signals are likely to do a better identifying job than public servants in national capitals or distant secretariats. Differing new exports will require differing transport modes and logistical support, and their viability will depend upon the ability of the transport system to respond to these commodity-specific needs. In sum, top-down transport planning should be designed to leave the maximum feasible scope for bottom-up development of the hard and soft infrastructure.

National governments outside the region, and groupings such as the G20 or G8, can play their part by maintaining open markets. If Central Asian countries do diversify their exports and increase their trade, it will promote growth in the region and benefit the trading partners. The benefits will be reduced if importing countries respond to producer pressure and impose anti-dumping duties or non-tariff barriers on imports from Central Asia. Encouraging WTO accession, provided that Central Asian countries make credible commitments to abide by world trade law, will help to guarantee security of market access for non-traditional exports from Central Asia.

Annex

Status of CAREC Corridors as of CAREC Senior Officials Meeting in October 2009

Corridor 1 (Europe - East Asia)

Kazakhstan's government approved, in February 2008 the feasibility study for the Western Europe–Western PRC Corridor Development Program, which covers 2,715 km of road on Corridor 1b from the Chinese border through Almaty and Shymkent to the Russian border north of Aktobe. CAREC's multilateral partners are providing loans to Kazakhstan to help finance the program: \$340 million from the Asian Development Bank (first tranche of a \$700 million multi-tranche financing facility approved in November 2008), \$180 million from the European Bank for Reconstruction and Development (approved in November 2008), \$170 million from the Islamic Development Bank (approved in February 2009), and \$2.1 billion from the World Bank (approved in April 2009).

The Kyrgyz Republic is improving the 488 km road section between Bishkek and Torugart on Corridor 1c. The ADB approved a \$20 million grant in October 2008 and a \$50 million loan/grant in August 2009 to finance rehabilitation of a 114 km section.

The PRC is upgrading the 297 km road section between Korla and Kuqa on Corridor 1c with ADB assistance. The PRC is also improving the 530 km road section between Turpan and Xingxingxia on Corridor 1 and a 68 km access road to Ala Shankou at the border with Kazakhstan. The PRC is constructing a new 286-km railway line from Jinghe through Yining to Khorgos in Xinjiang for completion in 2009. The PRC is building a large-scale logistics centre in Khorgos, Xinjiang.

Corridor 2 (Mediterranean - East Asia)

Azerbaijan is improving its segment (both roads and railways) with external assistance. Rehabilitation of the 85 km road section between Hajigabul and Kyurdamir was completed in 2008 with EBRD assistance. Improvement of the 38 km road section between Qazakh and the Georgian border is to be completed in 2009 with ADB

assistance. Reconstruction of the 89 km road section between Yevlakh and Ganja, via the Ganja bypass, is underway with assistance from ADB, IsDB, and the Saudi Fund for Development. Upgrading of the east–west railway line is underway with assistance from the World Bank (\$450 million loan approved in 2008). Azerbaijan started constructing the Baku International Sea Trade Port Complex, using public–private partnership arrangements in 2009.

The ADB is providing assistance for upgrading the road from Aktau in Kazakhstan to Guzar in Uzbekistan. Kazakhstan is preparing an investment project to improve the 540 km road section between Aktau and the Uzbekistan border. Uzbekistan is reconstructing the 131 km section between the Kazakhstan border and Guzar; work on the first 40 km section started in October 2009, and bidding for other sections is underway.

Corridor 3 (Russian Federation - Middle East and South Asia)

Kazakhstan completed a feasibility study on the road section between Almaty and Kapchagay in 2008. A concessionaire will manage the section. Kazakhstan completed a feasibility study on the electrification of the 650 km railway line between Almaty and Aktogay in 2008.

Tajikistan is preparing an investment project to improve the 66 km road between Dushanbe and Bratstvo at the border with Uzbekistan, with ADB assistance.

Uzbekistan started building the railway lines between Yangier and Djizak and between Yangier and Fakhad in 2009, with a total length of about 120 km.

Corridor 4 (Russian Federation–East Asia)

Mongolia is improving road Corridor 4a with ADB assistance. Rehabilitation of the 431 km section between Hovd and Yarant, at the border with PRC, is underway with grant funding from ADB. Mongolia is improving road Corridor 4b with ADB assistance; upgrading of

the 428 km section between Choyr and the border with PRC is ongoing, and about 40% of civil works have been completed.

Mongolia is building a new international airport in Ulaanbaatar with a \$288 million loan from the Japan International Cooperation Agency (approved in May 2008). Mongolia is also constructing a new runway at Olgiy airport along Corridor 4a.

The PRC is upgrading the 179 km railway line between Jining and Erenhot in Inner Mongolia, planned for completion in 2010.

Corridor 5 (East Asia–Middle East and South Asia)

The Kyrgyz Republic is improving the road sections from Irkeshtam, at the Chinese border, through Sary Tash to Karamyk, at the border with Tajikistan. Work on the 136 km section between Sary Tash and Karamyk, with ADB assistance, is about 20% complete. The 74 km section between Irkeshtam and Sary Tash is being improved with loans from the PRC.

Tajikistan is improving the road sections between Dushanbe and Karamyk at the border with the Kyrgyz Republic, with ADB assistance. Rehabilitation of the 140 km section between Dushanbe and Nurobod was completed in 2008. Physical progress on remaining sections is at 70% for the 77 km section between Nurobod and Nimich, 73% for the 25 km section between Nimich and Sayron, and 40% for the 95 km section between Sayron and Karamyk. Tajikistan is improving the road sections between Dushanbe and the border with Afghanistan, with assistance from JICA; work on a 12 km section between Dusti and Nizhni Pianj was completed in 2008, and work on the remaining 15 km section between Dusti and Nizhni Pianj and the 15 km section between Kurgan-Tube and Dusti started in 2009.

The ADB is helping formulate a cross-border agreement among the Kyrgyz Republic, PRC, and Tajikistan. The agreement will cover the PRC–Kyrgyz Republic border at Irkeshtam, and the Kyrgyz Republic–Tajikistan border at Karamyk. Two negotiating meetings between

the Kyrgyz Republic and Tajikistan have been conducted in 2009, and a third is scheduled for December 2009.

Corridor 6 (Europe–Middle East and South Asia)

Afghanistan is improving the road sections of corridors 6a and 6b with assistance from the ADB and IsDB. The 55 km section between Naibabad and the border with Uzbekistan and the 204 km Naibabad-Andkhoy section were rehabilitated in 2008 with ADB funding, and work on the 210 km section between Andkhoy and Qaisar is targeted for completion in 2009. Improvement of the 90 km section between Qaisar and Bala Murghab is 20% complete. Bidding for contracts for constructing a new 143 km section between Bala Murghab and Leman is underway. The 90 km section between Leman and Herat is being improved with IsDB funding.

The ADB is assisting Afghanistan with a study on development of a railway network across the north and other parts of the country, including links to Herat, Pakistan, and Tajikistan. In November 2009 Afghanistan will start building a 75 km railway line from the border with Uzbekistan to Mazar-e-Sharif, with grant support from ADB.

Figures:

Figure 1: The CAREC Corridors

Figure 2: Central Asia at the Center of Eurasia (from Linn 2009)



Figure 1 The CAREC Corridors

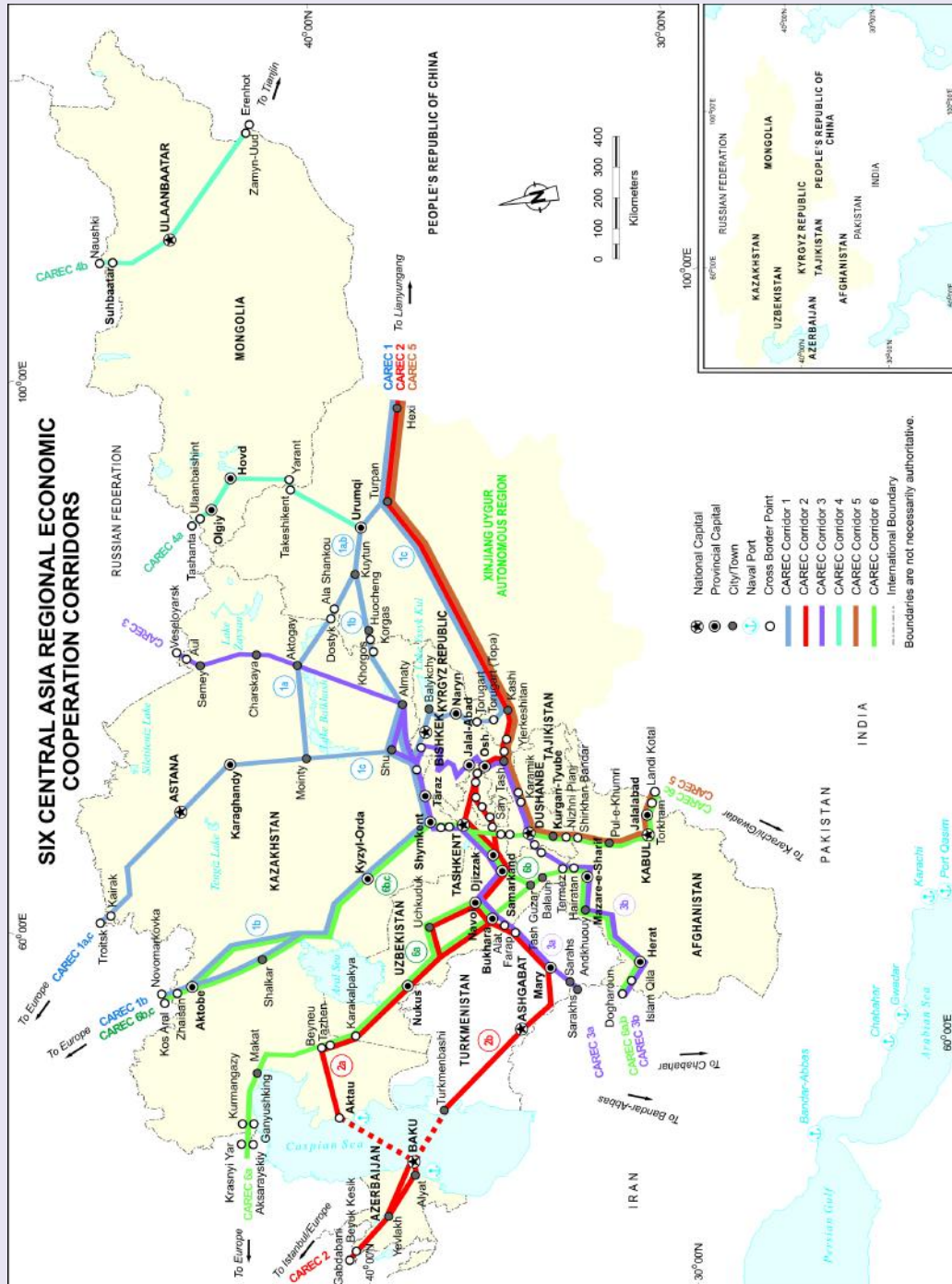
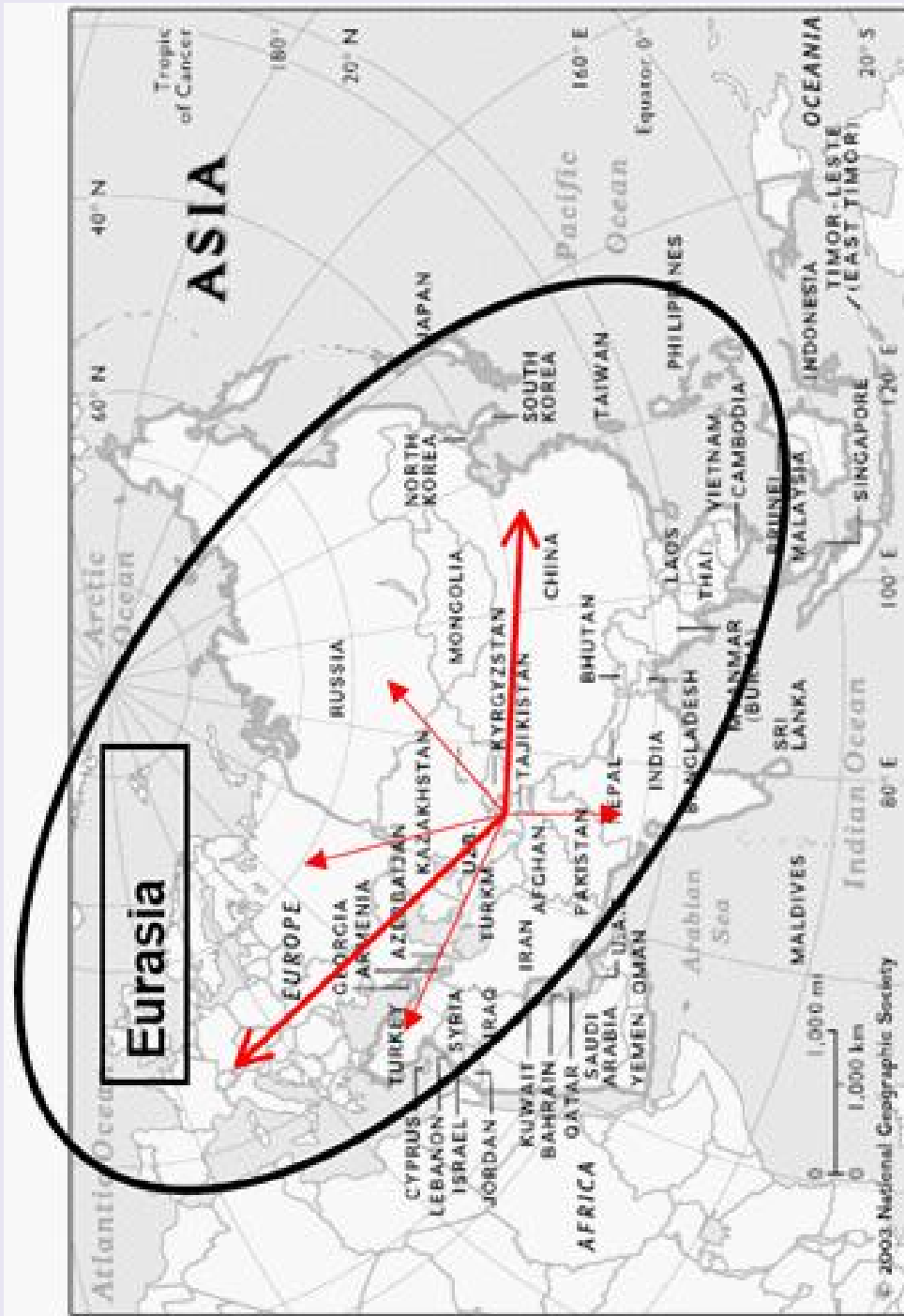


Figure 2 | Central Asia at the Center of Eurasia (from Linn 2009)



References

- ADB (2006) *Central Asia: Increasing gains from trade through regional cooperation in trade policy, transport, and customs transit* (Manila: Asian Development Bank).
- CAREC (2007): 'CAREC Transport and Trade Facilitation Strategy', Sixth Ministerial Conference on Central Asia Regional Economic Cooperation, November 2-3, 2007, Dushanbe, Tajikistan - available at <http://www.adb.org/Documents/Events/2007/6th-Ministerial-Conference-CAREC/Transport-Trade-Strategy.pdf>
- Findlay, Ronald, and Kevin O'Rourke (2007): *Power and Plenty: Trade, War, and the World Economy in the Second Millennium* (Princeton University Press: Princeton NJ).
- Kaminski, Bartłomiej, and Gaël Raballand (2009): 'Entrepôt for Chinese Consumer Goods in Central Asia: Re-exports through Kyrgyzstan - A Statistical Puzzle', forthcoming in *Eurasia Geography and Economics*.
- Linn, Johannes (2004): 'Economic (Dis)Integration Matters: The Soviet Collapse Revisited', unpublished paper (Brookings Institution, Washington DC).
- Linn, Johannes (2008): Regional Cooperation in Central Asia: Another Step Forward with CAREC http://www.brookings.edu/opinions/2008/1210_carec_linn.aspx.
- Linn, Johannes (2009): Connecting Central Asia with the World, paper presented at the First Eurasian Emerging Market Forum in Gerzensee, Switzerland, 31 January to February 2 - published in *Global Journal of Emerging Market Economies*.2009; 1: 241-258 .
- Mogilevsky, Roman (2009): Trends in Foreign Trade of CAREC Countries, unpublished ms. prepared at the CAREC Institute, Almaty.
- Pomfret, Richard (1995) *The Economies of Central Asia* (Princeton NJ: Princeton University Press).
- Pomfret, Richard (2006): *The Central Asian Economies since Independence* (Princeton NJ: Princeton University Press).
- Pomfret, Richard (2009) 'Central Asia and the Global Economic Crisis', *EU-Central Asia Monitoring (EUCAM) Policy Brief No.7*, Brussels: Centre for European Policy Studies (CEPS), and Madrid: Fundación para las Relaciones Internacionales y el Diálogo Exterior (FRIDE).
- Raballand, Gaël, Charles Kunaka and Bo Giersing (2008): The Impact of Regional Liberalization and Harmonization in Road Transport Services: A Focus on Zambia and Lessons for Landlocked Countries, *World Bank Policy Research Working Paper 4482*.
- Shepherd, Ben, and John S. Wilson (2006): Road Infrastructure in Europe and Central Asia: Does network quality affect trade? *World Bank Policy Research Working Paper 4104* - a related paper was published as 'Trade, Infrastructure, and Roadways in Europe and Central Asia: New Empirical Evidence', *Journal of Economic Integration* 22(4), 2007, 723-47.
- Teravaninthorn, Supee, and Gaël Raballand (2009): *Transport prices and costs in Africa: A review of the main international corridors* (World Bank: Washington DC).
- Tumbarello, Patrizia (2005): Regional Integration and WTO Accession: Which is the right sequencing? An application to the CIS, *IMF Working Paper 05/94*.
- United Nations Development Programme (2005): *Central Asia Human Development Report: Bringing Down Barriers: Regional cooperation for human development and human society* (UNDP, Bratislava).
- Vinokurov, Evgeny, Murat Jadraliyev and Yuri Shcherbanin (2009): The EurAsEC Transport Corridors, *Eurasian Development Bank Sector Report* (Eurasian Development Bank, Almaty), March.
- World Bank (2004): *Trade Performance and Regional Integration of the CIS Countries* (Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region, World Bank, Washington DC).



The Emerging Markets Forum was created by the Centennial Group as a not-for-profit initiative to bring together high-level government and corporate leaders from around the world to engage in dialogue on the key economic, financial and social issues facing emerging market countries.

The Forum is focused on some 70 emerging market economies in East and South Asia, Eurasia, Latin America and Africa that share prospects of superior economic performance, already have or seek to create a conducive business environment and are of near-term interest to private investors, both domestic and international. Our current list of EMCs is shown on the back cover. We expect this list to evolve over time, as countries' policies and prospects change.



Further details on the Forum and its meetings may be seen on our website at <http://www.emergingmarketsforum.org>

The Watergate Office Building, 2600 Virginia Avenue, NW, Suite 201
Washington, DC 20037, USA. Tel:(1) 202 393 6663 Fax: (1) 202 393 6556
Email: info@emergingmarketsforum.org